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Advancing dementia care: a review of Italy's public health response within the WHO Global Action Plan and European strategies

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ABSTRACT

Introduction Dementia is a growing global public health priority, with the WHO Global Action Plan (GAP) calling for coordinated efforts worldwide. Italy, one of the oldest nations globally, faces a significant challenge with approximately 2 million individuals living with dementia or mild cognitive impairment. In response, the Italian Fund for Alzheimer's and other Dementias (IFAD) was established in 2020 to align national efforts with the WHO GAP's objectives. This study analyses IFAD activities from 2021 to 2023, offering insights into Italy's public health response to dementia and its relevance to global strategies.

Methods We conducted a structured, iterative review of all activities coordinated by the Italian Dementia Observatory (OssDem-Istituto Superiore di Sanità (ISS)) within IFAD 2021–2023. Global, regional and national documents on dementia prevention, care and support were retrieved from official websites, institutional repositories and targeted web searches using the keywords 'dementia', 'brain health' and 'ageing'. Two reviewers independently screened and extracted data with a predefined matrix mapped to the seven WHO GAP Action Areas. Human-subject studies cited had independent ethics approval and informed consent; no new data were collected for this review.

Results IFAD activities led to substantial progress in dementia care services, with memory clinics, residential care facilities and daycare centres mapped, revealing regional disparities in service provision. Modifiable risk factors accounted for 39.5% of dementia cases in Italy, with an estimated 67 000 cases preventable through risk reduction. National guidelines were developed to standardise dementia care pathways, and training programmes addressed gaps in HP and caregiver preparedness, particularly highlighted by the COVID-19 pandemic.

Discussion Italy's experience provides valuable lessons for countries facing similar demographic challenges. The IFAD extension to 2024–2026 aims to address persistent regional disparities and further implement national guidelines and prevention strategies. By integrating Italy's progress with broader international frameworks, the Italian

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ The WHO has called for coordinated global action on dementia through the Global Action Plan (GAP), yet few countries have developed and implemented comprehensive national dementia plans. Italy, despite demographic pressures, lacked detailed evaluations of how its recent public health investments align with the GAP framework.

WHAT THIS STUDY ADDS

⇒ This study systematically analyses the Italian Fund for Alzheimer's and other Dementias 2021–2023, mapping its activities across all seven WHO GAP action areas. It provides the first national and subnational synthesis of Italy's public health response to dementia, highlighting key strengths, gaps and regional disparities.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ The findings offer a model for integrating global strategies with national policy and practice, particularly for countries with decentralised health systems. They inform ongoing policy developments in Italy and contribute to the international dialogue on equitable, scalable and coordinated dementia care strategies.

model can inform global efforts to enhance dementia care, highlighting the importance of scalable, regionally adapted strategies for addressing the growing global burden of dementia.

INTRODUCTION

In 2017, the WHO launched the Global Action Plan (GAP) on the Public Health Response to Dementia. The plan urged all countries to collectively prioritise dementia by increasing public health interventions and research efforts.[1] However, as of late 2024, there is still much more work to be done globally. As an example, only 20% of the 194 countries had developed a national dementia plan (NDP), much less than the expected 75% target. Moreover, only 26 countries have a stand-alone NDP, and most of the available NDPs are still inadequately funded or not funded at all.[1–3] In 2023, Alzheimer Disease International (ADI) called for an extension of the GAP until 2029 to provide countries with more time to achieve the targets.

Italy is the third oldest country in the world, with 24% of its population being 65 years or older.[4] According to available estimates, nearly 2 million people in Italy live with dementia or mild cognitive impairment (MCI), and 4 million relatives and caregivers are involved in caring for and supporting people with cognitive disorders[5–8] (table 1 and online supplemental Tables 1–66). Age is still the main risk factor (RF) for dementia. Thus, strategies and specific objectives are needed to improve the lives of people with dementia (PwD) and their caregivers, as well as the impact of the disease on communities. Italy is currently working on meeting the WHO GAP's targets. In 2014, Italy formally developed its first Italian National Dementia Plan (hereby referred to as Italian NDP) without any government funding.[9] In December 2020, the Italian parliament approved the Italian Fund for Alzheimer's and other Dementias (IFAD), with a budget of €15 million for the years 2021–2023.[10–13] The activities of the fund, aimed at supporting the implementation of the Italian NDP, were coordinated by the Italian Ministry of Health (MoH) in collaboration with the Dementia Observatory (OssDem-ISS) of the Italian National Institute of Health (Istituto Superiore di Sanità, ISS) and involved all 21 Italian regions and autonomous provinces (APs). In 2023, the IFAD was further funded with €35 million for the following 3 years[14] (IFAD 2024–2026) (online supplemental Figure 1). Although previous studies have been published on the evaluation of NDPs or strategies, they mainly focused on specific action areas (AAs). This review aims to provide a detailed description and analysis of the activities carried out by the OssDem-ISS within the IFAD 2021–2023, reporting the results of activities spanning all the seven AAs defined by the WHO GAP on dementia, with both national and subnational details (figure 1).

While several components of the IFAD 2021–2023 have been previously disseminated through project-specific reports or academic publications, this manuscript represents the first integrated synthesis of the IFAD nationwide implementation. It connects policy frameworks, quantitative analyses and qualitative findings into a single, comprehensive narrative to inform future planning at national and international level. First, we outline the collaborative efforts of Italian National Institutions, regions and APs in promoting a public health response to dementia. Then, we provide a policy context summarising the relevant characteristics of the Italian scenario concerning the broader European context, highlighting key lessons to foster international dialogue on barriers and facilitators. Lastly, we propose a transnational strategy for the public health response to dementia, aiming to leverage the resources, infrastructure and expertise of complementary parallel projects to enhance cooperation among European institutions.

METHODS

This study contextualises and critically analyses the results obtained from various activities coordinated by the OssDem-ISS under the IFAD 2021–2023. The literature and document reviews were conducted through a structured, iterative process. Global, regional and national documents related to dementia prevention, care and support were identified through official websites,[15] institutional repositories, including the MoH[16] and the ISS,[17] and targeted web searches. Keywords such as "dementia," "brain health" and "ageing" were used to identify and evaluate relevant guidelines, reports and action plans (figure 2 and online supplemental Table 67). Two researchers (AA and SS) independently screened and extracted relevant content based on a predefined matrix aligned with the WHO GAP action areas. Documents and literature were selected based on their relevance to the seven AAs defined by the WHO GAP on dementia. The collected information was synthesised to contextualise Italy's efforts within the WHO GAP framework, identify gaps and challenges and inform future perspectives (see table 2).

This manuscript does not involve new data collection or direct participant involvement; hence, no additional ethics approval was required for this review. However, each study involving human participants—such as national surveys and focus groups—was independently approved by the relevant institutional review boards or the Italian National Ethics Committee (see online supplemental table 68). Informed consent was obtained from all participants, with clear information provided on study aims, voluntary participation, confidentiality and withdrawal rights. Focus group data were managed in compliance with the European General Data Protection Regulation (GDPR), securely stored and anonymised before analysis. All procedures adhered to the Declaration of Helsinki. For studies already published in peer-reviewed journals, we briefly summarise the methods and refer to the original articles. For unpublished data, we provide methodological details and reference institutional reports. The

Table 1 National and subnational overview of estimated cases of dementia and mild cognitive impairment

	North regions		Central regions		South Island regions		Italy	
Age categories	**Males**	**Females**	**Males**	**Females**	**Males**	**Females**	**Males**	**Females**
Estimated cases of YOD*, n (95% CI)								
35 to 39	0	35 (23 to 46)	0	15 (8 to 23)	0	27 (17 to 37)	0	77 (60 to 94)
40 to 44	32 (21 to 43)	95 (76 to 114)	14 (7 to 21)	43 (30 to 56)	24 (14 to 33)	72 (55 to 88)	70 (53 to 86)	209 (181 to 238)
45 to 49	248 (217 to 279)	107 (87 to 127)	106 (86 to 126)	48 (34 to 61)	172 (146 to 198)	76 (59 to 93)	526 (421 to 571)	231 (201 to 261)
50 to 54	437 (396 to 478)	717 (665 to 770)	183 (156 to 209)	315 (280 to 350)	289 (256 to 323)	499 (455 to 543)	909 (850 to 968)	1532 (1455 to 1609)
55 to 59	1996 (1908 to 2083)	1740 (1659 to 1822)	833 (777 to 890)	760 (706 to 814)	1352 (1280 to 1424)	1235 (1166 to 1304)	4181 (4055 to 4308)	3736 (3616 to 3855)
60 to 64	2676 (2575 to 2777)	3020 (2913 to 3128)	1140 (1074 to 1206)	1327 (1255 to 1398)	1927 (1841 to 2013)	2245 (2152 to 2338)	5743 (5595 to 5891)	6592 (6433 to 6571)
Total	11 104 (10 898 to 11 311)		4783 (4648 to 4919)		7919 (7745 to 8093)		23 806 (23 504 to 24 108)	
Estimated cases of LOD*, n (95% CI)								
65 to 69	7091 (6927 to 7256)	9425 (9236 to 9614)	3043 (2935 to 3150)	4161 (4035 to 4287)	5326 (5183 to 5468)	7135 (6970 to 7300)	15 460 (15 217 to 15 702)	20 721 (20 441 to 21 002)
70 to 74	15 094 (14 856 to 15 332)	17 994 (17 734 to 18 254)	6449 (6293 to 6604)	7767 (7597 to 7938)	10 997 (10 794 to 11 200)	13 017 (12 796 to 13 238)	32 540 (32 190 to 32 890)	38 779 (38 397 to 39 160)
75 to 79	27 396 (27 080 to 27 713)	40 498 (40 115 to 40 881)	11 670 (11 463 to 11 876)	17 474 (17 223 to 17 726)	18 279 (18 020 to 18 538)	26 829 (26 517 to 27 140)	57 345 (56 887 to 57 804)	84 801 (84 246 to 85 355)
80 to 84	42 554 (42 169 to 42 940)	86 512 (85 975 to 87 048)	17 796 (17 547 to 18 046)	36 354 (36 006 to 36 702)	25 391 (25 093 to 25 689)	51 437 (51 023 to 51 851)	85 741 (85 194 to 86 289)	174 302 (173 540 to 175 064)
85 to 89	36 041 (35 696 to 36 386)	115 624 (115 053 to 116 196)	16 016 (15 786 to 16 247)	49 786 (49 411 to 50 161)	22 364 (22 092 to 22 636)	69 303 (68 861 to 69 746)	74 422 (73 926 to 74 918)	234 713 (233 899 to 235 528)
90+	34 377 (34 076 to 34 679)	114 582 (114 064 to 115 101)	16 142 (15 935 to 16 348)	48 693 (48 355 to 49 032)	22 481 (22 237 to 22 725)	64 288 (63 899 to 64 676)	73 000 (72 561 to 73 439)	227 563 (226 833 to 228 294)
Total	547 190 (545 801 to 548 580)		235 251 (234 440 to 236 263)		336 846 (335 751 to 337 941)		1 119 387 (1 117 398 to 1 121 378)	
Estimated cases of MCI*, n (95% CI)								
60 to 69	69 036 (68 532 to 69 541)	88 400 (87 831 to 88 968)	29 502 (29 172 to 29 832)	38 919 (38 541 to 39 296)	50 689 (50 256 to 51 121)	66 272 (65 780 to 66 764)	149 227 (148 485 to 149 969)	193 590 (192 749 to 194 432)

Continued

Table 1 Continued

Age categories	North regions		Central regions		South Island regions		Italy	
	Males	Females	Males	Females	Males	Females	Males	Females
70 to 79	74 918 (74 397 to 75 439)	89 383 (88 814 to 89 952)	31 964 (31 623 to 32 304)	38 576 (38 202 to 38 950)	52 500 (52 063 to 52 936)	62 105 (61 631 to 62 579)	159 381 (158 621 to 160 141)	190 064 (189 234 to 190 893)
80 to 89	51 980 (51 550 to 52 411)	77 279 (76 754 to 77 804)	22 220 (21 939 to 22 502)	32 796 (32 454 to 33 138)	31 454 (31 119 to 31 789)	46 097 (45 691 to 46 503)	105 655 (105 041 to 106 269)	156 172 (155 426 to 156 919)
Total	450 996 (449 716 to 452 276)		193 977 (193 137 to 194 816)		309 116 (308 056 to 310 176)		954 089 (952 227 to 955 950)	

Note: dementia cases by sex and age group are determined from the Italian resident population as of 1 January 2023 (https://demo.istat.it/).
North regions: Liguria, Piemonte, Valle D'Aosta, Lombardia, Emilia-Romagna, P.A. Bolzano, P.A. Trento, Veneto, Friuli Venezia Giulia; **central regions:** Toscana, Umbria, Marche, Lazio e Abruzzo; **southern regions and islands:** Molise, Puglia, Basilicata, Calabria, Sicilia, Campania, Sardegna.
*More details on the methodology adopted can be found on page 3 of the online supplemental materials.
LOD, late-onset dementia; MCI, mild cognitive impairment; YOD, young-onset dementia.

following sections outline the methodologies adopted in the main lines of activity.

National surveys on dementia services and facilities across Italy and on caregivers of PwD

Three national surveys were conducted to update data on dementia services and facilities across Italy, focusing on memory clinics (Centres for Cognitive Disorders and Dementias, CCDDs), day care centres (DCCs) and nursing homes (NHs) (see box 1). The first survey gathered comprehensive information on CCDDs, collecting data on operational days and hours, patient access procedures and activation dates. It also included information on staff composition, integrated care pathways (ICPs), computerised archives, assessment tools, clinical activity, annual patient evaluations, diagnoses and services provided, with respondents offering data for 2019, the last full year before the COVID-19 pandemic. A detailed description of the methodology can be found elsewhere.[18 19] The survey of DCCs analysed factors such as staff composition, centre types (integrated or specialised Alzheimer's), operation hours, patient access, waiting lists, annual patient evaluations and types of psychosocial, educational and rehabilitation services provided. The third survey investigated NHs, analysing locations, specialised services for dementia patients, staff composition, patient evaluations, access procedures, waiting lists, standardised assessment tools, collaboration with healthcare providers and service quality for patients and staff well-being. Additionally, a survey dedicated to caregivers of PwD employed quota sampling for representativeness across regions, focusing on the challenges of the diagnosis process, financial costs of dementia care and the impact of COVID-19 on caregiving and available services. A detailed description of these surveys' methodology can be found elsewhere.[8]

Focus groups for family members of PwD and healthcare professionals

Focus groups involved organising sessions for family members and healthcare professionals (HPs) across various regions, including the APs of Trento and Bolzano. Each region hosted two focus groups: one with caregivers of PwD and another with HPs involved in dementia care, such as nurses, psychologists and geriatricians. The focus groups aimed to gather qualitative insights into the strengths and challenges of dementia care pathways, areas for improvement and the impact of the COVID-19 pandemic on service delivery. Participants were recruited via email through the IFAD stakeholder network. The meetings took place from October 2022 to July 2023, primarily online to facilitate participation, though some were held in person at healthcare facilities or associations. Each session lasted 90 min, was audio-recorded and transcribed with informed consent. Thematic analysis was performed using NVivo Pro software, where data were coded and categorised based on

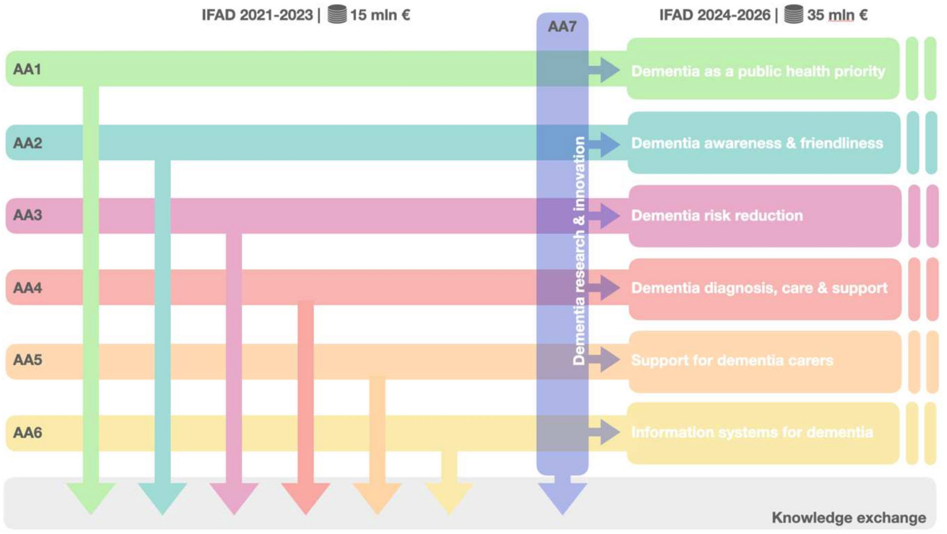

Figure 1 IFAD 2021–2023 activities organised by WHO GAP action area. The activities falling under action areas (AAs) 1 to 6 operate independently and ensure a continuous exchange of knowledge across multiple channels and targets. Data from these activities are useful within other research and innovation activities (AA7), which will increase the exchange of knowledge and consequentially determine the mutual improvement of the activities under AAs 1 to 6. GAP, Global Action Plan; IFAD, Italian Fund for Alzheimer's and other Dementias.

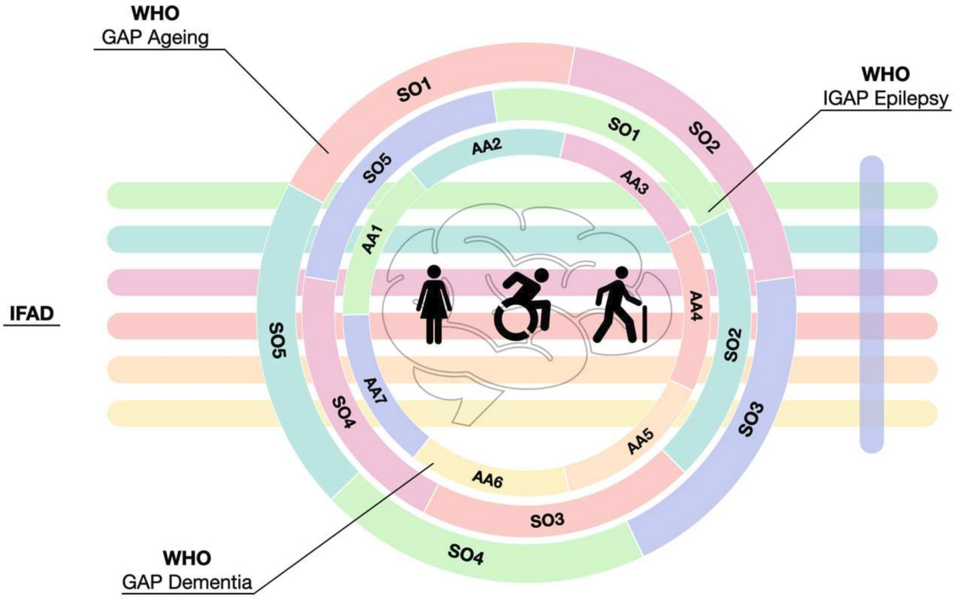

Figure 2 Key WHO GAPs outlining the life course approach to promote healthy brain ageing. This infographic shows the comprehensive approach to promoting healthy brain ageing, as described in the most relevant WHO action plans. The diagram includes three circles, with (1) the GAP on dementia, (2) the IGAP on epilepsy and other neurological disorders and (3) the GAP on ageing. Each segment of the circle of the GAP on dementia represents one of the action areas (AAs), while each segment of the circles of the GAP on ageing and IGAP on epilepsy and other disorders represents one of the strategic objectives (SOs). The lines on the background are the activities carried out within the framework of the Italian Fund for Alzheimer's and other Dementias (IFAD) 2021–2023 and described in online supplemental Table 74). GAP on dementia: AA1—dementia as a public health priority; AA2—dementia awareness and friendliness; AA3—dementia risk reduction; AA4—dementia diagnosis, care and support; AA5—support for dementia carers; AA6—information systems for dementia; AA7—dementia research and innovation. IGAP on epilepsy and other neurological disorders: SO1—raise the prioritisation and strengthen governance; SO2—provide effective, timely and responsive diagnosis, treatment and care; SO3—implement strategies for promotion and prevention; SO4—foster research and innovation and strengthen information systems; SO5—strengthen the public health approach to epilepsy. GAP on ageing: SO1—commitment to action on healthy ageing; SO2—developing age-friendly environments; SO3—aligning health systems to the needs of older populations; SO4—developing sustainable and equitable systems for providing LTC; SO5—improving measurement, monitoring and research on healthy ageing. GAP, Global Action Plan; IGAP, Intersectoral Global Action Plan; LTC, long-term care.

Table 2 IFAD 2021–2023 activities organised by the WHO GAP action area, with future directions, strategic objectives, selected barriers and selected facilitators

IFAD 2021–2023 activities	Future directions	Strategic objectives	Selected barriers	Selected facilitators
Action area 1: dementia as a public health priority				
Update of the Italian NDP	▶ Meet WHO[90] and ADI[91] recommendations ▶ Meet objectives and goals of the WHO GAP on dementia[1] and IGAP on epilepsy and other neurological disorders[70,71] ▶ Fill research gaps of the WHO Blueprint dementia research[58]	▶ Multiprofessional and intersectoral participatory approach in monitoring and evaluation processes ▶ Fixed proportion of governmental funds for healthcare annually dedicated to dementia	▶ Misalignment between increasing burden of disease and economic resources ▶ Limited political awareness and lack of continuing support	▶ Existence of a National Committee on Dementia ▶ Long-standing national experience on a public health approach to dementia
Action area 2: dementia awareness and friendliness				
Dementia-friendly communities	▶ Meet WHO recommendations on dementia-inclusive societies and age-friendly cities[31,92] ▶ Meet ADI key principles[32] of dementia-friendly communities	▶ National and local context analysis on dementia-inclusive activities ▶ Dissemination and implementation of EU second Joint Action on Dementia best practices on dementia-friendly communities[34]	▶ Ageism and ableism ▶ Lack of established points of contact between stakeholders ▶ Fragmentation of health and social expertise	▶ Availability of national recommendations[29] ▶ Availability of a census of the relevant patient and family associations
Action area 3: dementia risk reduction				
Universal prevention of dementia in Italy	▶ Meet the objectives and goals of WHO GAP on NCD and the EURO adaptation[93,94] ▶ Develop activities within the EU4Health programme[95] ▶ Consider the determinants of brain health as defined by the WHO[96]	▶ Transnational collaborative effort within the EU third Joint Action on Dementia ▶ Define a cross-cutting strategy for the development of national plans on dementia, chronicity and prevention	▶ Single disease-specific approaches in healthcare ▶ Lack of robust and up-to-date indicators	▶ Availability of national surveillance systems[21,22] with regional and local data ▶ Availability of operational national plans on dementia, NCDs and disease prevention[97]
Action area 4: dementia diagnosis, treatment, care and support				
National guideline on dementia and MCI	▶ Develop strategies for the international dissemination of the Italian guideline ▶ Translate the recommendations and content of the guideline	▶ Integrate cost-effective interventions into the National Health Benefit package ▶ National and subnational implementation of the guideline	▶ Lack of structured national strategies for the dissemination and implementation of guidelines ▶ Geographical heterogeneity in the availability of infrastructures and resources	▶ Regulations supporting the enforcement of national clinical guidelines[98] ▶ Availability of a national guideline system
National surveys on dementia services	▶ Meet the WHO principles on quality health services[99]	▶ Develop national standards for dementia-specific health and social services ▶ Develop a geographic information system for dementia-specific health services	▶ Complexity of the formal care network for people with dementia ▶ Healthcare workforce crisis	▶ Existence of a National Committee on Dementia ▶ Availability of a census of dementia-specific healthcare services
Integrated care pathways (ICPs) for dementia	▶ Meet WHO principles on long-term care[100]	▶ Include the guideline recommendations within ICPs for dementia ▶ Develop national indicators for ICPs for dementia	▶ Lack of structural funds supporting the development of ICPs ▶ Limited reach of training on how to develop ICPs	▶ Availability of dementia-specific multiprofessional working groups at subnational level ▶ Availability of national recommendations[26]

Continued

Table 2 Continued

IFAD 2021–2023 activities	Future directions	Strategic objectives	Selected barriers	Selected facilitators
Training of health and social care professionals	▶ Develop a national educational strategy on dementia (professionals)	▶ Include dementia-specific educational needs within the Italian Continuing Medical Education system ▶ Dissemination and implementation of the national recommendations on dementia-specific clinical governance[30]	▶ Wide heterogeneity of educational needs according to different settings ▶ Limited data on the long-term effect of learning on clinical outcomes	▶ Existence of multiple scientific associations focusing on dementia ▶ Possibility of including dementia-specific curricula within the health services training plans
Action area 5: support for dementia carers				
National survey and training support programmes for carers	▶ Develop a national training strategy on dementia (caregivers)	▶ Develop a national e-learning platform ▶ Cultural adaptation of the WHO iSupport for dementia programme to the Italian context[61]	▶ Lack of awareness of existing learning and training opportunities ▶ Lack of health and digital literacy	▶ Existence of multiple patient and family associations focusing on dementia ▶ Availability of nationally representative data on caregivers' training needs
Action area 6: information systems for dementia				
A national health information system for dementia	▶ Meet objectives and goals of the WHO GAP on dementia and IGAP on epilepsy and other neurological disorders[1 71] ▶ Fill research gaps of the WHO Blueprint dementia research[58]	▶ Validate dementia-specific healthcare information systems ▶ Dissemination and implementation of indications from the national committee[28]	▶ Lack of relevant legislation on healthcare information systems ▶ Personal and healthcare data protection	▶ Availability of experiences on the implementation of dementia-specific healthcare information systems ▶ Availability of the new healthcare information system
Action area 7: dementia research and innovation				
Knowledge translation and dissemination	▶ Fill research gaps of the WHO Blueprint dementia research[58]	▶ Develop implementation strategies for the adoption of the national guideline on dementia and MCI ▶ Assess inequalities in dementia care according to geographical area ▶ Dementia-specific evidence-to-policy activities	▶ Fragmentation of dementia-specific research activities ▶ Lack of structural resources for implementation activities	▶ Availability of multiple research centres dedicated to dementia ▶ Active participation of municipalities in dementia-specific research activities

ADI, Alzheimer's Disease International; EU, European Union; GAP, Global Action Plan; IFAD, Italian Fund for Alzheimer's and other Dementias; IGAP, Intersectoral Global Action Plan; MCI, mild cognitive impairment; NCD, non-communicable disease; NDP, national dementia plan.

key research questions and emerging themes. A detailed description of the methodology can be found elsewhere.[8]

Estimation of population attributable fractions (PAFs) and potential impact fractions (PIFs) of dementia cases in Italy

An analysis was conducted to estimate the proportion of dementia cases attributable to modifiable RFs in Italy.[20] Prevalence data were obtained from national surveillance systems, including Passi and Passi d'Argento,[21 22] which monitor modifiable RFs associated with chronic diseases. These systems employ cross-sectional surveys to collect data from random samples of residents aged 18–69 and 65+, respectively. 11 established modifiable RFs were considered, excluding traumatic brain injury due to data unavailability. To calculate the population attributable fraction (PAF), the prevalence of each RF was sourced from the surveys, along with their relative risks for dementia from the Lancet Commission.[23] The potential impact fraction (PIF) analysis modelled potential scenarios for partial reductions in these RFs, enabling a comprehensive assessment of their impact on dementia cases. A detailed description of the methodology can be found elsewhere.[8]

Document analysis of the Italian Regional Prevention Plans (RPPs) and on the ICPs for dementia

A document analysis of 21 Italian Regional Prevention Plans (RPPs) focused on population-level dementia prevention strategies. A detailed description of the methodology can be found elsewhere.[24] A document analysis of ICPs for dementia involved systematic data extraction from the Italian MoH to identify relevant regional

Box 1 Services for people with dementia (PwD) in Italy: description and roles of Centers for Cognitive Disorders and Dementias, day care centres and nursing homes

Centers for Cognitive Disorders and Dementias (CCDDs)

The CCDDs offer specialised diagnostic assessments, treatment planning and comprehensive management for PwD. They provide multidisciplinary support involving neurologists, geriatricians, psychiatrists and other health professionals to customise interventions to individual needs. Additionally, they include services and outpatient clinics that are functionally connected to the main CCDD through decentralised organisational branches.

Nursing homes (NHs)

The NHs are residential facilities that offer social and healthcare services. They are mostly private, operating under agreement with the Italian National Health System, but they can also be public. They provide comprehensive care for PwDs who need continuous supervision and assistance with daily activities. These facilities provide a secure environment and specialised services to address behavioural and psychological symptoms associated with dementia and other specific health needs.

Day care centres (DCCs)

The DCCs are semiresidential facilities that provide social and healthcare services. They are mostly private, operating under agreement with the Italian National Health System, but can also be public. These centres offer structured day programmes that include social interaction, cognitive stimulation and therapeutic activities for PwD. In addition to supporting caregivers with respite care, they also help delay the need for more intensive residential care.

health authorities and their official documents. ICPs were collected through web searches, direct contact with local health authorities (LHAs) and data from a previous Dementia Observatory survey.[25] A checklist based on the National Guidelines for Integrated Care for People with Dementia (NGICPD) was created,[26] encompassing three domains: reference framework, elements of the ICP and integrated management and construction of the ICP. A detailed description of the methodology can be found elsewhere.[8]

Patient and public involvement

Patients and the public were involved in both the design and conduct of several components of the activities reviewed in this study. National and local patient associations contributed to the design of surveys and focus groups targeting PwD and their caregivers and were also consulted to identify priorities and needs within dementia care pathways. Moreover, representatives from these associations were actively involved in the drafting and revision of the related scientific publications. These activities were conducted as part of the broader implementation of the IFAD 2021–2023. Although no patients or public representatives were involved in drafting or revising the present review manuscript, dissemination of the results was carried out in collaboration with patient associations to ensure accessibility and engagement.

RESULTS

Action area 1: dementia as a public health priority

Update of the Italian NDP

The 2014 Italian NDP was the first major public health action aimed at improving care for PwD and their carers through reducing stigma, ensuring rights, updating knowledge and coordinating dementia care activities in Italy.[9] The NDP endorsed a participatory approach, involving all relevant stakeholders in long-term, integrated care strategies.[8] A national committee (herein referred to as the committee) was created in 2015 and formally established in 2021[27] to develop policy documents for better integrated dementia care.[26 28–30] The committee evaluated the NDP's implementation across all regions and APs. It also addressed previously neglected issues, such as young-onset dementia and dementia among migrants and minorities. These will be included in the next NDP update as part of IFAD's activities for 2024–2026, ensuring a participatory approach that involves stakeholder engagement.

Action area 2: dementia awareness and friendliness

Dementia-friendly communities (DFCs) in Italy

Addressing the stigma surrounding dementia requires increasing public awareness and fostering inclusivity within communities.[31 32] Dementia-friendly communities (DFCs) provide a cost-effective model for supporting PwD, creating environments that alleviate the burden on individuals and society.[33] In Italy, the 2014 NDP introduced initiatives focused on developing DFCs.[9] A census identified 57 DFCs across Italy, with a regional distribution of 77.2% in the northern regions, 14.0% in the southern regions and islands and 8.8% in the central regions.[8] Many DFCs have adopted best practices from the European Union (EU) Joint Action—act on dementia,[34] such as using social media and websites to disseminate dementia-related information. Collaboration among stakeholders is vital for creating successful DFCs and establishing clear pathways and responsibilities.[35] The Committee issued the "National Guidance for Developing Dementia-Friendly Communities",[29] providing recommendations based on four core principles: defining a DFC, outlining actions to promote DFCs, establishing impact and activity indicators and identifying processes, responsibilities and collaborations among local entities. As emphasised in recommendation 3 (see online supplemental materials), fostering a cultural shift towards inclusivity for PwD requires adequate financial resources. However, a significant challenge for DFCs in Italy is the absence of formal institutional support, with many relying on intermittent external funding.[8] To address this, creating long-term, sustainable ecosystems through collaborative projects that bring together public and private entities, municipalities and the third sector is essential.

Action area 3: dementia risk reduction

Universal prevention of dementia in Italy

Preventing dementia is becoming a global priority due to increasing evidence on modifiable RFs.[1 23 36–38] Adopting a healthy lifestyle can reduce dementia risk at the individual level. At the population level, public health policies can lower the prevalence of specific RFs.[39–42] Collecting country-specific epidemiological data[43] is crucial for effective dementia prevention policies.[44–46] The IFAD activities addressed dementia prevention through a population-based approach, focusing on two actions: (1) estimating preventable dementia cases using PAFs for established RFs, and (2) evaluating dementia prevention inclusion in national and regional health policies, like the national prevention plan (NPP) and its regional adaptations (RPPs).[47] Integrating these approaches fosters tailored science for policy activities. Using national surveillance systems, Passi and Passi D'argento, we estimated PAFs in Italy[21 22] (see online supplemental Table 69). Our data showed that 39.5% of dementia cases in Italy could be attributed to 11 modifiable RFs, with subnational PAFs ranging from 30.5% in the north to 47.4% in the south. We also estimated that a 20% reduction in these RFs could prevent up to 67 000 dementia cases nationally. An analysis of population-level dementia prevention strategies showed that physical inactivity is the most commonly targeted RF in Italy, addressed by 20 of 21 RPPs.[24] Half the RPPs addressed smoking and alcohol consumption, while obesity, hypertension and diabetes were addressed by about 25%. However, no RPPs included dementia-specific strategies for hearing loss, less education and depression. Common barriers to implementation were a lack of information about disease burden and intervention feasibility.

Action area 4: dementia diagnosis, treatment, care and support

National guideline on the 'Diagnosis and treatment of dementia and Mild Cognitive Impairment'

As part of IFAD 2021–2023, the Italian MoH entrusted the ISS with developing a national guideline for the diagnosis and treatment of dementia and MCI. The Guideline Working Group, using the Grading of Recommendations Assessment, Development and Evaluation (GRADE)-ADOLOPMENT methodology, updated and adapted the existing NICE Guideline 97.[48] New review questions and recommendations for diagnosing and managing MCI were included.[49–51] The guideline addressed 47 review questions, with 33 from NG97 and 13 defined ex novo, including 10 on MCI. A total of 167 clinical practice and 39 research recommendations were approved. The guideline also included an economic evaluation of dementia's impact in Italy (see online supplemental Table 70 and Figure 2). To support implementation, we have developed an interactive care pathway for HPs and a leaflet for PwD and the general public. These tools are available on the WHO Global Dementia Observatory's Knowledge Exchange Platform[52] and have been translated into English for the official OssDem-ISS website,[50] as well as for a scientific publication.[51]

National surveys on dementia services

Three surveys were conducted to gather information on dementia services in Italy (online supplemental Table 71), updating data from previous studies.[19 53] The first survey targeted 534 CCDDs, with a 96% response rate.[18] Data showed dementia was the most common diagnosis in CCDDs (59%), followed by MCI (21%) and subjective cognitive disorder (12%). We observed significant regional disparities in care services,[18] which may result in varied care of PwD, from accurate diagnosis to non-pharmacological treatment. For instance, neuropsychologists, occupational therapists and physiotherapists are unevenly distributed in the CCDDs of Northern, Central and Southern Italy. Additionally, <5% of CCDDs have interpreters or cultural mediators, negatively impacting the services provided to PwD with specific linguistic and sociocultural needs (see online supplemental Table 72). Only one-third of CCDDs operated 5 days a week, and less than half offered telemedicine services. Regarding the availability of home care services, less than half of the CCDDs reported directly providing or offering Alzheimer's Café services, and approximately two-thirds reported offering NHs and DCCs. There was also significant variation in the availability of Alzheimer's Café and DCCs across Italy's northern, central and southern regions. The second survey reached out to 1084 DCCs, receiving a 45.6% response rate.[8] Results indicated that 55.3% of DCCs admitted both PwD and people with other conditions, while 20.8% were exclusively for PwD. Geriatricians managed most DCCs. Two-thirds reported a waiting time shorter than 3 months, with regional variations (see online supplemental Table 73). The third survey involved 3607 NHs, with a 46.8% response rate[8] (see online supplemental Table 74). Most facilities admitted both PwD and people with other conditions, while only 1.1% were exclusively for PwD. Of the responding NHs, 94.7% were private with NHS agreements, and 3.9% were public. Only around 25% of the NHs reported having an Alzheimer's unit. The main reasons for institutionalisation included loss of autonomy due to neurodegenerative diseases, difficulty managing behavioural disorders and lack of social support. All facilities that participated in the survey were mapped, and results are available on the OssDem-ISS website,[54] which provides a tool useful to identify the closest services dedicated to dementia and details such as service manager, address, directions, opening hours, phone number and email for each structure.

ICPs for dementia

The 2014 Italian NDP aimed to define formal dementia-specific ICPs to ensure the quality of care for PwD. In 2017, the Committee issued the 'National Guidance for the Definition of Integrated Care Pathways for Dementia' to support local ICP development.[26] An analysis of 39 ICPs updated a 2020 evaluation.[25] Data showed that 60% of regions and APs and 27% of LHAs had developed an ICP. Significant differences were found between NGICPD guidelines[26] and actual ICP characteristics, highlighting the need for new ICPs to meet quality criteria. Critical issues included the low number of local ICPs and difficulty accessing these documents online. However, the most significant issue was the lack of monitoring and audit indicators, particularly economic and administrative ones, which are essential for resource allocation and monitoring. The recent publication of the national guideline[49–52] provides an opportunity to develop new ICPs or update existing ones as part of its implementation strategies.

National guidance for the clinical governance of dementia

The committee developed the policy document 'National Guidance for the Clinical Governance of Dementia' between 2018 and 2020.[30] The document aims to establish best practices and standards for professionals involved in communicating the diagnosis of dementia. It provides an updated overview of the ethical legislations and regulations that affect critical decisions on managing some steps in the life of PwD. The document includes 13 indications based on laws and supported by literature, referring to advance directives, care planning and end-of-life, strategies for the communication of a diagnosis of dementia and assessment of capacity (see online supplemental materials).

Training of health and social care professionals

The WHO's Mental Health Gap Action Programme provides guidelines for dementia care in non-specialist settings, emphasising the importance of an integrated care network to improve PwD's quality of life.[55] Training programmes for health and social care professionals are crucial to support integrated care, especially for those with moderate to severe dementia. Focus groups[8] (see 'Action area 5: Support for dementia carers') identified inadequate and outdated training, service overload and lack of dedicated figures like case managers as main barriers to quality of care in primary and secondary settings, as reported by HPs. An in-person course was designed for health and social care professionals to improve their skills in identifying warning signs, managing behavioural and psychological symptoms, developing communication strategies, defining roles and responsibilities and preventing burnout (https://www.demenze.it/it-ricerca_news). The course also aimed to raise awareness about implementing integrated management through developing ICPs tailored to local contexts.

Action area 5: support for dementia carers

National survey and training support programmes for carers

The interventions to support carers of PwD used a two-step approach. First, focus groups and a national survey[8] investigated socioeconomic issues affecting families and carers. Then, an in-person course was developed. The survey gathered data from 2369 family caregivers, showing a median time of 12 months between dementia symptom onset and diagnosis, with Alzheimer's disease accounting for half the cases. Additionally, 85% of caregivers supported people with moderate-to-severe dementia. Out-of-pocket costs ranged from 1200 to 1800 euros/month, varying by institutionalisation status. The survey revealed 43% of carers had a negative view of dementia services, and the COVID-19 pandemic significantly disrupted care pathways. Using qualitative research, focus groups with family carers from each Italian region identified areas for improvement.

"(It is necessary) to create a dedicated ICP with dedicated outpatient activities, trained staff who take charge together with all the other figures to follow the patient." and training needs.

"Sometimes, no matter how prepared we may consider ourselves to be, we are not prepared at all…".

Carers emphasised the need for better integration between public health services and voluntary associations.

"(…) it [Alzheimer Café] allows the creation of that system of connections between caregivers and between patients, where one no longer feels so alone (…). These are all moments that (…) make everyday life less difficult to cope with",

improved service management through information technology (IT) tools, and more dementia awareness campaigns. Additionally, 54.7% of carers had no contact with local family associations. They suggested personalised training programmes addressing the specific needs of PwD at different stages, including communication techniques, behavioural symptom management and guidance on bureaucratic, legal and administrative procedures.

"I left my job, I left my house, I left everything, I left my life in a nutshell. (…) I don't even have my own room here [ed. at his parents' home], (…). I don't know how much longer I can do this".

An in-person course was organised to equip caregivers with effective management strategies and support PwD while promoting their well-being.

Action area 6: information systems for dementia

A national health information system for dementia

In 2013, the ADI recommended the establishment of national health information systems (NHISs) for dementia.[56] These systems are crucial for implementing NDPs. The committee issued the 'National Guidance on the use of Information Systems to characterise dementia',[28] providing indications for improving the use of health information systems (HISs) to develop an electronic health record for PwD. However, Italy has not yet established a specific NHIS for dementia, and existing local HISs still provide insufficient data on PwD.[57] Moreover, attempts to unify information systems to calculate expected dementia cases are still limited. Among the IFAD activities addressing this topic, a case-control study[8] was carried out on 400 people in the province of Modena (see the following section, 'Action area 7: dementia research and innovation'). Applying the same study design at a national level could provide better estimates of the number of PwD living in Italy.

Action area 7: dementia research and innovation

In 2021, the WHO issued a blueprint for dementia research, emphasising the need for increased support and investment in research quality.[58] While IFAD's primary goal was to enhance care standards for PwD, it also addressed multiple research gaps iteratively (see figure 1). This section discusses IFAD's contributions to dementia research and innovation (AA7), focusing on WHO blueprint strategic goals (SGs). A significant challenge in dementia understanding and service development is the lack of reliable data from HISs. A study in Modena, Emilia-Romagna, validated an algorithm for dementia epidemiology, identifying cases in primary care with 96% sensitivity and 93% specificity, covering 78% of estimated cases. Future research will assess the application of this algorithm to other regions and use it for reliable economic models based on real-world data (SG 2). A recent report[8] updated the distribution of DFCs in Italy.[29] Despite efforts, significant gaps remain in understanding regional heterogeneity. Future research should assess barriers and facilitators contributing to this heterogeneity and evaluate whether DFC activities meet national and international best practices (table 2 and online supplemental materials) (EU second JA, Act on Dementia).[34] Global research on population-based dementia prevention interventions is increasing, aiming to change the distribution of potentially modifiable RFs.[23 36 38 39 59] Our analysis of the Italian RPPs (see AA3 section)[24] identified strengths and gaps in Italy's dementia prevention interventions (SG 13). Future research should explore intersections with other non-communicable diseases (NCDs) to maximise intervention effectiveness and sustainability.[60] A promising framework is Hachinski's approach, targeting dementia, stroke and myocardial infarction (SG 14, SG 15).[60] Research gaps exist in carers' training needs for PwD in terms of content, accessibility and type of interventions, as our focus groups[8] show a lack of available content across all dementia stages (SG 11). In 2019, the WHO developed the iSupport for Dementia programme, translated into several languages, including Italian.[61] As part of the activities of IFAD 2024–2026, we will evaluate the adaptability of this programme to the sociocultural diversity that characterises the Italian macro-areas.

Projects conducted by regions and APs

In March 2022, the decree on the IFAD 2021–2023 was formally issued, dedicating €900 000 to the activities carried out by the OssDem-ISS of the ISS and €14.1 million to the activities carried out by the regions and APs.[27] The decree defined the distribution of economic resources and listed the five strategic objectives that were to be carried out through specific actions. The projects conducted by regions and APs were categorised within the five strategies. The projects were carried out independently by each region and AP, with the supervision of the OssDem-ISS. Further details on these activities are reported in online supplemental Tables 75 and 76.

DISCUSSION

Policy context

This Review provides an overview of the actions taken in Italy during IFAD 2021–2023, comparing them to the WHO GAP framework.[1] While IFAD's activities were independently planned, adopting the WHO GAP framework helps to align Italy's efforts with international strategies, fostering global harmonisation. This allows us to reflect on public health interventions in Italy from an international perspective and identify barriers and facilitators that could inform other countries (table 2). Italy has one of the highest life expectancies in the EU, at 83 years, with women reaching 22.1 more years and men 18.9 years post-65.[62 63] However, the country faces significant demographic challenges, with 37.1% of its population expected to be aged 65 or older by 2050, the highest in the EU.[64] Currently, Italy allocates <10% of its healthcare budget to long-term care, which is 6% below the EU average, resulting in unmet care needs for older people.[63 65] With dementia ranking as the third leading cause of disability-adjusted life years and prevalence expected to reach 29.2 per 1000 by 2040,[64 66] these challenges are critical.

The recent Ministerial Decree 77/2022[67] seeks to address these issues by promoting integrated, person-centred care, emphasising home-based services, and limiting institutionalisation for those at higher risk, such as PwD. Despite progress, the regionalisation of Italy's NHS has created significant barriers, with fragmented interventions, limited regional dementia committees and varying access to ICPs. The extension of IFAD (2024–2026) and its increased budget of €35 million (online supplemental Tables 76 and 77) are important steps towards achieving equity, quality and sustainability in dementia care, even if still lower than other G7 nations.[68 69] Furthermore, the WHO Intersectoral GAP (IGAP)on epilepsy and neurological disorders and its implementation tool[70 71] are expected to further support the dementia response (see figure 2). Growing attention to brain health and the evidence supporting preventive strategies will also advance the life-course approach, aligning with the United Nations (UN) Decade of Healthy Ageing and the 2030 Sustainable Development Goals (SDG) Agenda.[72 73]

Future perspectives on the Italian public health response to dementia

The refinancing of IFAD ensures the continuation of key activities detailed in this review, providing an opportunity to consolidate progress, overcome barriers and further develop future initiatives. For the 2024–2026 period, eight priority areas (PAs) have been identified:

1. Disseminating and implementing the national guideline;
2. Updating the 2014 Italian NDP;

3. Revising guidance documents from the national committee;
4. Developing a national training strategy for both professionals and caregivers;
5. Evaluating dementia prevention strategies at individual and population levels;
6. Identifying national indicators for dementia services;
7. Defining national indicators for dementia-specific ICPs;
8. Supporting telerehabilitation evaluation activities.

These priorities reflect necessary resource allocation, development time and the potential impact of previous actions. They also consider recent advances, such as new diagnostic opportunities and emerging treatment options. For instance, the European Commission has recently granted EU authorisation for the monoclonal antibody lecanemab.[74] As disease-modifying therapies begin to enter routine clinical practice across Europe, healthcare systems should proactively reorganise to ensure quality of care that is timely, efficient, equitable and integrated for those with cognitive decline.[75]

To achieve these care standards, the first step is harmonising procedures across care networks, improving communication between key care providers and disseminating shared documents (PAs 1, 2 and 3). The second step focuses on preparing healthcare systems for the large-scale introduction of DMTs. This involves enhancing the infusion capacity of CCDDs, ensuring efficient monitoring of adverse effects and equitable distribution of these services across regions (PAs 6 and 7). A crucial pillar of preparedness is the timely and accurate biological profiling of patients with cognitive decline for DMT prescription. A key priority is validating blood-based biomarkers for Alzheimer's disease, in line with international performance standards[76] and WHO guidelines.[77]

Finally, comprehensive training is needed to ensure the proper use of diagnostic tools, aligning them with the needs of specific care settings (PA 4). In the broader European context, it is also critical to invest in dementia prevention strategies, balancing selective and universal prevention efforts.[24 40] These efforts should span across primary care, CCDDs and the newly proposed brain health services.[78] Selective prevention must be integrated into larger, population-level strategies, leveraging synergies between modifiable RFs for dementia and other chronic NCDs (PA 5).

Limitations

This review has several inherent constraints. First, its scope is deliberately restricted to initiatives funded through the IFAD 2021–2023; important dementia-related programmes financed by other national or regional mechanisms fall outside the present synthesis and are therefore under-represented. Second, several authors were directly involved in both the implementation and the evaluation of IFAD activities. This embedded perspective may introduce interpretative bias. Third, a number of IFAD workstreams had generated outputs that, while documented in a publicly accessible national report, have not yet been peer-reviewed or published in international journals. These factors should be borne in mind when interpreting the breadth and generalisability of the conclusions presented.

Towards a European strategy for the public health response to dementia

International cooperation is crucial in addressing dementia as a global public health priority. The WHO GAP provides a standardised framework to align interventions across countries, facilitating the sharing of knowledge and experience necessary for a coordinated European strategy.[1] Dementia research and care require collaboration across disciplines and regions, as evidenced by the leadership role of the WHO European region in global dementia policy.[3]

However, a comprehensive strategy integrating funding and interregional cooperation is essential to create a sustainable ecosystem for dementia care. Based on our review of IFAD-supported initiatives, we propose a strategic framework structured around four foundational pillars. The first pillar focuses on bridging the gap between knowledge and action by accelerating and harmonising research. Initiatives such as the European Neurodegenerative Diseases Partnership (https://epnd.org) enable researchers to standardise practices in line with the WHO blueprint and the European Academy of Neurology's research agenda.[58 79] The Horizon Strategic Plan 2025–2027, emphasising brain health, further supports this effort.[80]

The second pillar highlights the dissemination and implementation of best practices through international cooperation. Projects like the EU Joint Actions on Dementia,[34 81] coordinated by OssDem-ISS, foster collaboration across more than 10 countries, advancing dementia and stroke prevention strategies. This is crucial to ensuring consistency in care and research across Europe.[82] Scientific societies, such as the Eurpean Academy of Neurology (EAN), play a pivotal role in building capacity and developing interdisciplinary training to avoid redundant efforts.

The third pillar supports evidence-based policymaking, essential for raising awareness and prioritising dementia among policy makers. Platforms like the WHO Global Dementia Observatory help coordinate national and international efforts.[83] Strong collaboration between public health agencies and international organisations, exemplified by the WHO and OssDem-ISS memorandum, can streamline these efforts.[84] Aligning dementia-focused projects with broader NCD initiatives enhances the overall impact on public health. Moreover, integrating brain health and dementia indicators into NCD projects, such as Joint Actions focusing on cardiovascular diseases or cancer and coordinating shared activities targeting policy makers, will enhance the overall sustainability.

Investment in information infrastructure, like the European Health Data Space, and research funds, such as Innovative Health Initiative and Horizon Europe,[85,86] is key to sustaining these efforts. By coordinating resources from European funds, the European Partnership for Brain Health[87] can further strengthen future dementia interventions.[88,89] This strategy, based on research harmonisation, best practices and evidence-based policy making, ensures a united European response to dementia, improving the lives of PwD, their families and society at large.

CONCLUSION

In conclusion, this review provides a comprehensive synthesis of a large-scale public investment aimed at improving dementia care, prevention and stakeholder engagement in Italy. Anchored to the WHO GAP framework, it offers actionable insights into how national strategies can be harmonised with global public health agendas. The strategic model presented—built around research coordination, implementation of best practices and evidence-informed policy making—sets the foundation for a sustainable European ecosystem for brain health. By documenting both progress and remaining challenges, this work aims to support policy makers, health professionals and researchers in scaling equitable, integrated and future-proof responses to dementia across Europe and beyond.

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REFERENCES

1 WHO. *Global Action Plan on the Public Health Response to Dementia 2017–2025*. Geneva: World Health Organization, 2017.
2 *Alzheimer's Disease International (2023) From Plan to Impact VI: Making Every Step Count*. London: Alzheimer's Disease International, 2023.
3 *Global Status Report on the Public Health Response to Dementia*. Geneva: World Health Organization, 2021.
4 Nearly stable population thanks to immigration. Available: https://www.istat.it/it/files//2024/03/Indicatori_demografici_26_03_2024_english.pdf [Accessed 10 May 2024].
5 Bacigalupo I, Mayer F, Lacorte E, *et al*. A Systematic Review and Meta-Analysis on the Prevalence of Dementia in Europe: Estimates from the Highest-Quality Studies Adopting the DSM IV Diagnostic Criteria. *J Alzheimers Dis* 2018;66:1471–81.
6 Chiari A, Vinceti G, Adani G, *et al*. Epidemiology of early onset dementia and its clinical presentations in the province of Modena, Italy. *Alzheimers Dement* 2021;17:81–8.
7 Sachdev PS, Lipnicki DM, Kochan NA, *et al*. The Prevalence of Mild Cognitive Impairment in Diverse Geographical and Ethnocultural Regions: The COSMIC Collaboration. *PLoS One* 2015;10:e0142388.
8 Globaldementia.org. Report of the results of the italian fund for alzheimer's and other dementias. 2024. Available: https://globaldementia.org/en/resource/report-of-the-results-of-the-italian-fund-for-alzheimers-and-other-dementias
9 FiandraT, Canevelli M, PucchioA, *et al*. Italian Dementia National Plan Working Group. The Italian Dementia National Plan. Commentary. *Ann Ist Super Sanita* 2015;51:261–4.
10 The Lancet Neurology. Dementia care: beyond a diagnosis. *Lancet Neurol* 2022;21:947.
11 LEGGE 30 dicembre 2020, n. 178. Available: https://www.gazzettaufficiale.it/eli/id/2021/01/18/21A00174/sg#:~:text=178%2C%20recante%3A%20%C2%ABBilancio%20di,322%20del%2030%20dicembre%202020 [Accessed 10 May 2024].
12 Ancidoni A, Sciancalepore F, Bacigalupo I, *et al*. The Italian fund for Alzheimer's and other dementias: strategies and objectives to face the dementia challenge. *Ann Ist Super Sanita* 2022;58:192–6.
13 Ancidoni A, Lacorte E, Bacigalupo I, *et al*. Italy's actions on dementia. *Lancet Neurol* 2023;22:111.
14 Trova norme & concorsi - normativa sanitaria. Available: https://www.trovanorme.salute.gov.it/norme/dettaglioAtto?id=98173 [Accessed 10 May 2024].
15 World Health Organization. World health organization. World Health Organization; 2023. Available: https://www.who.int/
16 Ministero della salute. Available: https://www.salute.gov.it/portale/home.html [Accessed 21 Oct 2024].
17 Istituto superiore di sanità (ISS) - ISS. n.d. Available: https://www.iss.it/
18 Bacigalupo I, Giaquinto F, Salvi E, *et al*. A new national survey of centers for cognitive disorders and dementias in Italy. *Neurol Sci* 2024;45:525–38.
19 Canevelli M, Di Pucchio A, Marzolini F, *et al*. A National Survey of Centers for Cognitive Disorders and Dementias in Italy. *J Alzheimers Dis* 2021;83:1849–57.
20 Asta F, Bellomo G, Contoli B, *et al*. Preventing dementia in Italy: Estimations of modifiable risk factors and public health implications. *J Prev Alzheimers Dis* 2025;12:100055.
21 Progressi delle aziende sanitarie per la salute in Italia. Available: https://www.salute.gov.it/portale/stiliVita/dettaglioContenutiStiliVita.jsp?lingua=italiano&id=2953&area=stiliVita&menu=sorveglianza [Accessed 10 May 2024].
22 EpicentroIssIt. La qualità della vita vista dalle persone con 65 anni e più. 2023. Available: https://www.epicentro.iss.it/passi-argento/
23 Livingston G, Huntley J, Sommerlad A, *et al*. Dementia prevention, intervention, and care: 2020 report of the Lancet Commission [published correction appears in Lancet. *Lancet* 2023;396:1132–446.
24 Salemme S, Marconi D, Pani SM, *et al*. Universal Prevention of Dementia in Italy: A Document Analysis of the 21 Italian Regional Prevention Plans. *J Prev Alzheimers Dis* 2024;11:1525–33.
25 Gervasi G, Bellomo G, Mayer F, *et al*. Integrated care pathways on dementia in Italy: a survey testing the compliance with a national guidance. *Neurol Sci* 2020;41:917–24.
26 Linee di indirizzo nazionali sui percorsi diagnostico terapeutici assistenziali per le demenze. Available: https://www.iss.it/documents/20126/5783571/Testo+Linee+di+indirizzo+Nazionali+sui+Percorsi+Diagnostico+Terapeutici+Assistenziali+%28PDTA%29+per+le+demenze.pdf/d5123f6a-2161-6c42-5377-8796cce29fe0?t=1626170681347 [Accessed 10 May 2024].
27 G.u. 30 marzo 2022, n. 75. Available: https://www.gazzettaufficiale.it/eli/gu/2022/03/30/75/sg/pdf [Accessed 10 May 2024].
28 Linee di indirizzo nazionali sull'uso dei sistemi informativi per caratterizzare il fenomeno delle demenze. Available: https://www.iss.it/documents/20126/5783571/Testo+Linee+di+indirizzo+Nazionali+sull%E2%80%99uso+dei+Sistemi+Informativi+per+caratterizzare+il+fenomeno+delle+demenze.pdf/72be22fe-c68b-6818-bbb9-4c18731d22ae?t=1626170706656 [Accessed 10 May 2024].
29 Linee di indirizzo nazionali per la costruzione di "Comunità amiche delle persone con demenza. Available: https://www.iss.it/documents/20126/5783571/Linee+di+indirizzo+nazionali+per+la+costruzione+di+%E2%80%9CComunit%C3%A0+amiche+delle+persone+con+demenza.pdf/8fbb820a-26ba-7f32-d8e6-d9240d1793ff?t=1626170862810 [Accessed 10 May 2024].
30 Raccomandazioni per la governance e la clinica nel settore delle demenze. Available: https://www.iss.it/documents/20126/5783571/Raccomandazioni+per+la+governance+e+la+clinica+nel+settore+delle+demenze.pdf/dbf0d6d5-6360-41d9-aa51-74b18f62dad8?t=1626171914860 [Accessed 10 May 2024].
31 *Towards a Dementia-Inclusive Society: WHO Toolkit for Dementia-Friendly Initiatives (DFIs)*. Geneva: World Health Organization, 2021.
32 Dementia friendly communities: key principles. Available: https://www.alzint.org/u/dfc-principles.pdf [Accessed 10 May 2024].
33 Buckner S, Darlington N, Woodward M, *et al*. Dementia Friendly Communities in England: A scoping study. *Int J Geriat Psychiatry* 2019;34:1235–43.
34 EU Joint Action - Act on Dementia. Understanding dementia friendly communities through the testing of best practice models. final report of work package 7 (wp7), deliverable 7.2. Available: https://webarchive.nrscotland.gov.uk/20210302002647/https:/www.actondementia.eu/sites/default/files/2019-12/EUJA%20FINAL%20REPORT%20V12.pdf [Accessed 10 May 2024].
35 Green G, Lakey L. *Building Dementia-Friendly Communities: A Priority for Everyone*. London: Alzheimer's Society, 2013.
36 Livingston G, Sommerlad A, Orgeta V, *et al*. Dementia prevention, intervention, and care. *Lancet* 2017;390:2673–734.
37 Wolters FJ, Chibnik LB, Waziry R, *et al*. Twenty-seven-year time trends in dementia incidence in Europe and the United States:

The Alzheimer Cohorts Consortium. *Neurology (ECronicon)* 2020;95:e519–31.

38 Livingston G, Huntley J, Liu KY, *et al*. Dementia prevention, intervention, and care: 2024 report of the Lancet standing Commission. *Lancet* 2024;404:572–628.

39 Walsh S, Wallace L, Kuhn I, *et al*. Population-level interventions for the primary prevention of dementia: a complex evidence review. *Lancet* 2023;402 Suppl 1:S13.

40 Walsh S, Merrick R, Brayne C. The relevance of social and commercial determinants for neurological health. *Lancet Neurol* 2022;21:1151–60.

41 Mukadam N, Anderson R, Knapp M, *et al*. Effective interventions for potentially modifiable risk factors for late-onset dementia: a costs and cost-effectiveness modelling study. *Lancet Healthy Longev* 2020;1:e13–20.

42 Mukadam N, Wolters FJ, Walsh S, *et al*. Changes in prevalence and incidence of dementia and risk factors for dementia: an analysis from cohort studies. *Lancet Public Health* 2024;9:e718–e460.

43 Stephan BCM, Cochrane L, Kafadar AH, *et al*. Population attributable fractions of modifiable risk factors for dementia: a systematic review and meta-analysis. *Lancet Healthy Longev* 2024;5:e406–21.

44 Suemoto CK, Mukadam N, Brucki SMD, *et al*. Risk factors for dementia in Brazil: Differences by region and race. *Alzheimers Dement* 2023;19:1849–57.

45 Jørgensen K, Nielsen TR, Nielsen A, *et al*. Potential for prevention of dementia in Denmark. *Alzheimers Dement* 2023;19:4590–8.

46 Mayer F, Di Pucchio A, Lacorte E, *et al*. An Estimate of Attributable Cases of Alzheimer Disease and Vascular Dementia due to Modifiable Risk Factors: The Impact of Primary Prevention in Europe and in Italy. *Dement Geriatr Cogn Dis Extra* 2018;8:60–71.

47 Piano nazionale della prevenzione: 2020-2025. Available: https://www.salute.gov.it/imgs/C_17_pubblicazioni_2955_allegato.pdf [Accessed 10 May 2024].

48 Pink J, O'Brien J, Robinson L, *et al*. Dementia: assessment, management and support: summary of updated NICE guidance. *BMJ* 2018;361:k2438.

49 ISS. Diagnosi e trattamento di demenza e mild cognitive impairment. Available: https://www.iss.it/-/snlg-diagnosi-e-trattamento-delle-demenze [Accessed 10 May 2024].

50 Linea guida diagnosi e trattamento di demenza e mild cognitive impairment. Available: https://www.demenze.it/it-schede-18-documentazione_sulle_demenze [Accessed 10 May 2024].

51 Fabrizi E, Ancidoni A, Locuratolo N, *et al*. The Italian guideline on diagnosis and treatment of dementia and mild cognitive impairment. *Age Ageing* 2024;53:afae250.

52 GlobaldementiaOrg. Diagnosis and treatment of dementia and mild cognitive impairment -italian guidelines. 2021. Available: https://globaldementia.org/en/resource/diagnosis-and-treatment-of-dementia-and-mild-cognitive-impairment-italian-guidelines

53 Di Pucchio A, Di Fiandra T, Marzolini F, *et al*. Survey of health and social-health services for people with dementia: methodology of the Italian national project. *Ann Ist Super Sanita* 2017;53:246–52.

54 Osservatorio demenze. Available: https://www.demenze.it [Accessed 10 Aug 2024].

55 World Health Organization. *mhGAP: Mental Health Gap Action Programme. Scaling up Care for Mental, Neurological, and Substance Use Disorders*. Geneva: World Health Organization, 2008.

56 Pot A, Petrea M. *Improving Dementia Care Worldwide: Ideas and Advice on Developing and Implementing a National Dementia Plan.* London: Bupa/ADI, 2013.

57 Bacigalupo I, Lombardo FL, Bargagli AM, *et al*. Identification of dementia and MCI cases in health information systems: An Italian validation study. *A&D Transl Res & Clin Interv* 2022;8:e12327.

58 *A Blueprint for Dementia Research*. Geneva: World Health Organization, 2022.

59 Agyepong I, Spicer N, Ooms G, *et al*. Lancet Commission on synergies between universal health coverage, health security, and health promotion. *Lancet* 2023;401:1928–2012.

60 Hachinski V. Brain Health-Curbing Stroke, Heart Disease, and Dementia: The 2020 Wartenberg Lecture. *Neurology (ECronicon)* 2021;97:273–9.

61 iSupport for dementia. *Training and Support Manual for Carers of People with Dementia*. Geneva: World Health Organization, 2019.

62 State of health in the eu, italia. Available: https://health.ec.europa.eu/document/download/1f348745-341f-425a-8dd6-28ff2fbd8ea3_en?filename=2023_chp_it_italian.pdf [Accessed 10 May 2024].

63 Health at a glance 2023. Available: https://www.oecd-ilibrary.org/docserver/7a7afb35-en.pdf?expires=1712655901&id=id&accname=guest&checksum=F5507CD788F0F79C1A287A97C46AFA82 [Accessed 10 May 2023].

64 United Nations. World social report 2023: leaving no one behind in an ageing world. UN DESA Publications; 2023. Available: https://desapublications.un.org/publications/world-social-report-2023-leaving-no-one-behind-ageing-world

65 Giulio de Belvis A, Meregaglia M, Morsella A, *et al*. Italy: Health System Review. *Health Syst Transit* 2022;24:1–236. Available: https://iris.who.int/bitstream/handle/10665/365363/9789289059305-eng.pdf?sequence=1

66 Nervous System Disorders Collaborators. Global, regional, and national burden of disorders affecting the nervous system, 1990-2021: a systematic analysis for the Global Burden of Disease Study 2021. *Lancet Neurol* 2021;23:344–81.

67 Gazzetta ufficiale. Available: https://www.gazzettaufficiale.it/eli/id/2022/06/22/22G00085/sg [Accessed 18 Oct 2024].

68 GOVUK. Health secretary announces 10-year plan for dementia. Available: https://www.gov.uk/government/news/health-secretary-announces-10-year-plan-for-dementia#:~:text=The%20government%20has%20already%20committed [Accessed 10 May 2024].

69 France. Wwwalzheimer-europeorg. Available: https://www.alzheimer-europe.org/policy/national-dementia-strategies/france?language_content_entity=en [Accessed 10 May 2024].

70 *Intersectoral global action plan on epilepsy and other neurological disorders 2022–2031*. Geneva: World Health Organization, 2023.

71 *Intersectoral Global Action Plan on Epilepsy and Other Neurological Disorders 2022–2031: Implementation Toolkit*. Geneva: World Health Organization, 2024.

72 World Health Organisation. Decade of healthy ageing (2020-2030). 2022. Available: https://www.who.int/initiatives/decade-of-healthy-ageing

73 United Nations Sustainable Development. The sustainable development agenda. Available: https://www.un.org/sustainabledevelopment/development-agenda [Accessed 21 Oct 2024].

74 HEALTH and food safety - commission authorises medicine for treatment of early alzheimer's disease. Available: https://ec.europa.eu/newsroom/sante/items/879055/cs [Accessed 26 Jun 2025].

75 Salemme S, Ancidoni A, Locuratolo N, *et al*. Advances in amyloid-targeting monoclonal antibodies for Alzheimer's disease: clinical and public health issues. *Expert Rev Neurother* 2023;23:1113–29.

76 Schindler SE, Galasko D, Pereira AC, *et al*. Acceptable performance of blood biomarker tests of amyloid pathology - recommendations from the Global CEO Initiative on Alzheimer's Disease. *Nat Rev Neurol* 2024;20:426–39.

77 *Preferred Product Characteristics of Blood-Based Biomarker Diagnostics for Alzheimer Disease*. Geneva: World Health Organization, 2024.

78 Frisoni GB, Altomare D, Ribaldi F, *et al*. Dementia prevention in memory clinics: recommendations from the European task force for brain health services. *Lancet Reg Health Eur* 2023;26:100576.

79 Boon P, Lescrauwaet E, Aleksovska K, *et al*. A strategic neurological research agenda for Europe: Towards clinically relevant and patient-centred neurological research priorities. *Eur J Neurol* 2024;31:e16171.

80 Strategic plan - european commission. 2024. Available: https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/strategic-plan_en [Accessed 10 May 2024].

81 Home. Alcove-project.eu. 2021. Available: https://www.alcove-project.eu/index.php/ [Accessed 21 Oct 2024].

82 The EU "healthier together" non-communicable diseases initiative. Available: https://health.ec.europa.eu/document/download/18238342-e8a8-493a-8afe-ed44da987800_en?filename=ncd_initiative_factsheet.pdf [Accessed 10 May 2024].

83 GDO KEP. Globaldementia.org. Available: https://globaldementia.org/en [Accessed 18 Oct 2024].

84 WHO and italian national institute of health sign memorandum of understanding to improve care for healthy ageing. Available: https://www.who.int/news/item/07-06-2024-who-and-italian-national-institute-of-health-sign-memorandum-of-understanding-to-improve-care-for-healthy-ageing [Accessed 2 Aug 2024].

85 Innovative health initiative | IHI innovative health initiative. 2024. Available: https://www.ihi.europa.eu

86 Horizon Europe. Research-and-innovation.ec.europa.eu. 2023. Available: https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en#:~:text=What%20is%20Horizon%20Europe%3F

87 CSA BrainHealth. Home page CSA brainhealth. Available: https://www.brainhealth-partnership.eu [Accessed 2 Aug 2024].

88 European-social-fund-plus.ec.europa.eu. European social fund plus. Available: https://european-social-fund-plus.ec.europa.eu/en [Accessed 2 Aug 2024].

89 European Commission. InfoRegio - European regional development fund. Available: https://ec.europa.eu/regional_policy/funding/erdf_en [Accessed 2 Aug 2024].

90 *Towards a Dementia Plan: A WHO Guide*. Geneva: World Health Organization, 2018.

91 Alzheimer's Disease International (ADI). Ideas and advice on developing and implementing a national dementia plan. Alzheimer's Disease International; 2013.

92 *National Programmes for Age-Friendly Cities and Communities: A Guide*. Geneva: World Health Organization, 2023.

93 Global Action Plan for the Prevention and Control of NCDs 2013-2020. World health organization (who). 2013. Available: https://www.who.int/publications/i/item/9789241506236 [Accessed 10 May 2024].

94 Action plan for the prevention and control of noncommunicable diseases in the who european region 2016–2025. Available: https://www.who.int/europe/publications/i/item/WHO-EURO-2016-2582-42338-58618 [Accessed 10 May 2024].

95 European Commission. EU4Health programme 2021-2027 – a vision for a healthier european union. 2021. Available: https://health.ec.europa.eu/funding/eu4health-programme-2021-2027-vision-healthier-european-union_en [Accessed 10 May 2024].

96 Optimizing brain health across the life course: who position paper. Geneva World HealthOrganization; 2022.

97 Piano nazionale cronicità direzione generale della programmazione sanitaria. 2016. Available: https://www.salute.gov.it/imgs/C_17_pubblicazioni_2584_allegato.pdf

98 Gazzetta ufficiale. Available: https://www.gazzettaufficiale.it/eli/id/2017/03/17/17G00041/sg [Accessed 10 May 2024].

99 *Quality Health Services: A Planning Guide*. Geneva: World Health Organization, 2020.

100 *Rebuilding for Sustainability and Resilience: Strengthening the Integrated Delivery of Long-Termcare in the European Region*. Copenhagen: WHO Regional Office for Europe, 2022.