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# Pooled 'place-based' budgets for health and social care: a scoping review

Davide Tebaldi & Jonathan Stokes

# Executive Summary

- Pooled budgets aim to overcome a lack of financial integration, to incentivise coordination and prevention over cure. This financial integration is, in theory, increasingly important as more recent models of integrated care attempt to target geographically-defined populations, 'place', rather than older models which targeted smaller segments of the population alone. Understanding how integrated budgets are rolled out in practice is vital to support theoretically more effective models to be implemented and empirically tested.

- The aim of this review is to shed light across multiple uncertainties which still exist on the practical implementation of pooling budgets: (i) which budgets are pooled (ii) how much of the total budgets are being pooled; (iii) at which population level (iv) does the integration of funds result in better health outcomes and/or savings?

- In summary, there is very little detail on the full implementation of pooled budgets in the current literature. There appear to be very few examples of fully 'place-based' budgets. In the national (UK) literature, it is difficult to discern whether the models have been fully implemented or are planned. In the international literature, it is difficult to separate effects of integrating funds from other simultaneous delivery changes. Most international examples occur in vastly different health systems to the UK, for example Accountable Care Organisations (ACOs) in the US where the population of interest is the insured rather than geographically-defined. Most target a specific population (e.g. elderly/high-risk, meso-integration level), rather than an entire population/place. There is wide variation across (i) monetary size (ii) existing or additional funds (iii) range of services. There is limited evidence of improved outcomes, particularly in the short-term and absent other changes. Particularly, limited evidence of any guarantee of shared savings as costs are re-dispersed.

- Key considerations that arise from the literature:

    - Variations in population need across 'place' influences the appropriate provider mix and allocated budgets. Depending on the budgets being pooled, there might be a need to re-consider the existing allocation formulas.

    - Frequently accompanying pooled budgets appears to be a simplification of the provider landscape into a single/integrated group, particularly so that there aren't powerful 'losers' as money flows change. This implies, at least as a starting point, the consideration of the overlap of providers with the selected commissioning geography. This might be a problem in regions where there is not clear overlap.

    - On their own, pooled budgets only address the comminssioning side of policy. It is unclear how much system and population outcome change can be achieved with pooled, place-based, budgets alone. Expenditure-side/providers/incentive changes likely also need to be examined moving forward to ultimately change provider behaviours and population outcomes.

# 1. Background

Better integrated care across health and social care partners, in theory, could simultaneously result in better health outcomes for the overall population and lower cost on behalf of health and care providers/commissioners [1]. In practice, however, the current evidence base does not seem to support this theoretical prediction [2].

There are heterogeneous models of integrated care, though, and a number of barriers might be hindering results. Early models of integrated care were highly focused on a small number of high-cost individuals [3], often resulting in increased costs as additional unmet needs were uncovered [4]. More recent approaches aim to target 'place', geographically defined populations, so more diverse groups and with increased preventative aims [5].

'Place' is currently defined by NHS England as covering "populations circa 250,000 to 500,000 people - served by a set of health and care providers in a town or district, connecting primary care networks to broader services including those provided by local councils, community hospitals or voluntary organisations." [6] This is roughly equivalent size to an average Clinical Commissioning Group (CCG)/Local Authority (LA).

Pooled budgets across sectors are often seen as a solution to the major barrier of lack of financial integration [7, 8], incentivising co-ordination of care across providers [1]. Pooled budgets have also been identified as the preferred arrangements for jointly commissioning services between LAs and CCGs in a recent survey by the Kings Fund [9].

Pooled budgets can be defined as the arrangement by which two or more budget holders make contributions to a common fund for spending on agreed services, projects, or interventions [1, 10, 11]. This can be achieved at different levels – e.g. national, regional or local – and may involve existing funds and/or additional resources.

In England, pooled budgets are enacted through a specific legal framework, which stems from Section 75 of the NHS act (originally introduced as section 31 of the 1999 act) re-introduced during the broader reform of the Health and Social Care Act in 2012 [9]. Section 75 permits CCGs and local authorities the autonomy to pool budgets on a voluntary basis, even if it is not legally binding. Since then, various pooled budget arrangements have developed in England, but still several uncertainties surround their implementation and efficacy, especially compared to international examples.

The use of financial incentives and potential use of pooled budgets, arguably, become increasingly important as the coverage of integrated care models increases to broader populations and 'place'. Understanding how integrated budgets are rolled out in practice is vital to support theoretically more effective models to be implemented and empirically tested.

## 2. Research Aim

Despite their well-established theoretical contribution to supporting delivery of better integrated care, several uncertainties still surround the implementation of pooled budgets. This includes a number of different factors, for instance:

I. which budgets are pooled (e.g. entire health and social care budgets, or for specific diseases);
II. how much of the total budgets are being pooled;
III. at which population level (e.g. National, System, Place, Neighbourhoods);
IV. does the integration of funds result in better health outcomes and/or savings on behalf of the healthcare payers?

Therefore, the aim of the present study is to find and describe, across these domains, practical examples of 'pooled budgets' in real world settings.

## 3. Search Strategy

We searched the published and grey (non-academic) literature for examples both internationally and nationally (UK).

We adopted a two-stage search strategy:

- In the first stage we systematically searched the following databases up to 30/07/2020: (i) Medline, (ii) Embase, (iii) EconLit (iiii) Google Scholar, for existing academic/non-academic reviews of pooled budgets. We combined text-word search terms for synonyms of "pooled-budget", "place-based budget", "pooling funds" and similar related to the broad concept of integrating funds for health and social care. The full search strategy is available in the appendix (7.1).

- We enriched the above through an additional iterative 'snowballing' search strategy [12]. This stage is still in progress for the academic publication.

One reviewer (DT) then screened and extracted studies according to pre-defined selection criteria. In summary, we concentrated on programmes which passed the planning stage and were practically implemented in the real-world setting. Therefore, screening criteria included only articles describing practical examples of pooled budgets across various health and care settings with a sufficient level of detail to determine the actual implementation of the programme. Only review articles, written in the English language and published after 1995 were included at this stage. Please refer to the appendix (7.1) for the full list of inclusion and exclusion criteria.

# 4. Main Findings

The full screening process is summarized in the PRISMA diagram included in the appendix (7.2). We identified a total of 3 relevant systematic reviews from the academic literature coherent with the current research aims [7, 10, 11]. The 'snowballing' search strategy has so far identified an additional 4 reports from the King's Fund which, to different extents, cover the topic of pooling budgets for health and social care [9, 13-15]. Additional details in the appendix (7.1).

There were examples of pooled budgets both internationally (section 4.1.5) and nationally (section 4.2.1). These examples involved both quantitative and qualitative studies with a greater number of the quantitative examples coming from the international literature. Nevertheless, the findings appeared broadly consistent across study type.

## 4.1 International examples

### 4.1.1 In terms of health system/country context

Most examples are from health systems which are not equivalent to the NHS in macro-terms. For example, much of the evidence comes from the >750 Accountable Care Organisations (ACOs) in the US, where actors in the private health system have more freedom for drastic changes to funding, payment and provider organisational form, but also less focus on equity. Perhaps the closest example in a comparable health system we identified is Norrtalje in Sweden (see Box 1), like the UK with a National Health Service.

### 4.1.2 In terms of target population

Two broad categories of pooled budget models were identified by this review. Mostly, pooled budgets targeted a specific population, often made up of people with high healthcare needs (meso-integration level), whereas other times they served an entire population living in a pre-determined geographical area, i.e. 'place-based' pooled budgets. Although often cited as examples of 'place-based budgets', ACOs in the US do cover a defined geography of the integrated provider, but also only an insured fragment of that geographical population. Norrtalje in Sweden, probably linked to health system type, was the only example of fully 'place-based' budgets that we identified. However, this model covered a smaller population than the NHS England definition, roughly 65,000 in each local authority (municipality) area.

### 4.1.3 In terms of what the pooled budget looked like

The full details and implementation steps of the budgets were frequently not described in the detail we would have liked. There did appear to be wide variation in the broad aspects we were able to measure, though, including monetary size, whether the budget came from existing or additional funds, and the range/comprehensiveness of services covered. In most cases, the budget appeared to be calculated based on population size (capitation), sometimes with additional elements such as fee-for-service/bundled payment.

#### 4.1.4 In terms of outcomes

Much of the quantitative evidence came from Canada and Australia where a series of pilots for testing new integrated models for older people or people with complex healthcare needs were performed, tending to find neutral overall costs but with some shifting of utilisation from secondary to primary care. Qualitative evaluation of the most relevant 'place-based' model, Norrtalje in Sweden, found some improvement in co-ordination, but no quantified cost reductions nor improved health outcomes. Findings of multiple evaluations of ACOs have similarly found a range of results, but, on average, slightly reduced cost without reducing quality. For many ACOs, though, increased costs due to identification of unmet healthcare needs.

*Box 1: The Norrtalje model, Sweden*

Established in 2006, Norrtalje, a local authority north of Stockholm in Sweden, implemented a single organisation-administered pooled budget for all health, social care and welfare payments (although this welfare budget was not pooled) for the entire population of circa 65,000. Additionally, the pooled budget was accompanied by creation of a new, single integrated provider organisation ("TioHundra AB") responsible for both health and social care delivery. The integrated provider organisation was overseen by a joint political governing board, six municipality politicians and six from the county, who appointed and held the right to dismiss the CEO of the integrated provider.

Before this implementation, the legacy system was Stockholm county council who provided, owned and tax-funded primary care and hospitals. All healthcare personnel, except two independent family practices, were salaried employees of the county council. The Norrtalje local authority, on the other hand, owned and funded local social care, operated a public nursing home, and contracted private home care services. They also provided financial assistance, childcare, school health services, and environmental health, as well as a number of other local non-health services. The result was a simplification from the previous 40 different contract agreements between payers and providers to contracting only the integrated organisation through the pooled budget.

Fears over closure of a local hospital, according to a qualitative study, was a key motive for implementing the organisational/financing changes to begin with. The idea being a larger provider organisation would be able to protect the hospital. The broad changes to the organisational/structural elements which were implemented, in the end, reportedly made it easier for subsequent clinical/service delivery changes to also occur. These latter changes potentially improved co-ordination. But the organisational and pooled budget changes alone were not sufficient, additional barriers such as different working cultures, concerns over work boundaries and autonomy, perceptions of extra co-ordination work, and different communications and record systems still had to be overcome with subsequent projects. The study also reported that implementing both organisational/pooled funding changes at the same time as the service delivery changes would have faced capacity issues, which is why they implemented in phases. The introduction of the financial changes also brought a lot of additional administration, having to meet national and county requirements and proving to regulators that the new distribution adhered to the rules for each traditional budget, plus the financing rules of the new integrated joint commissioning board. All considered, it took over five years for any qualitative improvement to patient experience and outcomes to be reported [16].

### 4.1.5 Specific International case examples

Australian Coordinated Care Trials [10, 20]

***Country health system type:*** National Health Insurance
***Regulation:*** State
***Financing***: State
***Provision:*** Private

***Population size:*** A total of 2704 persons participated in the trial out of 6716 eligible.
***Population description:*** Patients with a wide range of conditions and health states but with complex care needs.

***Monetary size****:* Capitated budget. From 0.50 to 5 Australian dollars per participants per day depending on which participating agency (covering a substantial proportion of health care services likely to be used by trial participants, but not fully comprehensive).
***Existing/Additional funding****:* Additional (financial incentive with a fixed budget)
***Service included****:* Broad set of services (but mainly primary care).

***Place based:*** No

***Study Design:*** Randomised controlled trial
***Summary of findings:*** Cost neutral ($3170 coordinated care compared with $3209 control group) but these estimates exclude the costs of care coordination. Mean quality of life did not improve.

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Norrtalje, Sweden [16, 21, 22]
*(Enabled by Socsam legislation, allowing pooling of budgets between health services, social services and social insurance)*

***Country health system type:*** National Health Service
***Regulation:*** State
***Financing***: State
***Provision:*** State

***Population size:*** Various, by local authority. Evaluation performed in Norrtalje, a local authority area North of Stockholm (65,000 population).
***Population description:*** Eight different local authorities (subregional level/municipalities). In the case of Norrtalje, entire population.

***Monetary size****:* Capitated budget. Up to 5% of the local authorities' budget (the amount varied according to each local authority).
***Existing/Additional funding****:* Existing funding

***Service included**:* Health services, social services and social insurance (primary, secondary, and public health).

***Place based:*** Yes

***Study Design:*** Pilot, qualitative
***Summary of findings:*** Improved coordination but overall, no cost reductions. The most detailed evaluation performed in one specific area found no improved health-outcomes.

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System of Integrated Services for Aged Persons (SIPA), Canada [7, 23].

***Country health system type:*** National Health Insurance
***Regulation:*** State
***Financing***: State
***Provision:*** Private

***Population size:*** a total size of 606 patients
***Population description:*** Community-dwelling older people resident in catchment area in Montreal, Quebec.

***Monetary size**:* GP received $400 per SIPA patient annually (in addition to traditional fee for service payments)
***Existing/Additional funding**:* Additional funding
***Service included**:* Multidisciplinary team with its own budget and governance.

***Place based:*** No

***Study Design:*** Randomised controlled trial
***Summary of findings:*** Accessibility increased, 50% reduction in 'bed blocking', no significant difference in utilisation or costs of other hospital services. Cost neutral, the increase in SIPA costs, compared with those for controls, was $3,390, while the decrease for SIPA clients for institutional costs was $3,770. Increased satisfaction for caregivers, no difference in health outcomes.

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The British Columbia Model, Canada [7]

***Country health system type:*** National Health Insurance
***Regulation:*** State
***Financing***: State
***Provision:*** Private

***Population size:*** regional/provincial model
***Population description:*** Patients with low to medium care needs, as well as to frail elderly persons with high care needs resident in seven different sites in the region of British Columbia

***Monetary size****:* n/a
***Existing/Additional funding****:* Not clear
***Service included****:* System level care plans covering wide range of health and social services such as home care nursing, community rehabilitation, home support services, adult day care services and group homes.

***Place based:*** No

***Study Design:*** Cost-minimisation analysis
***Summary of findings:*** Evaluation performed comparing Victoria, BC and Winnipeg, Manitoba. No difference in life satisfaction. For both sites, home care services were less costly than residential care services.

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Accountable Care Organizations (ACOs), USA [14, 24-27]

***Country health system type:*** Private Health System
***Regulation:*** Private
***Financing***: Private
***Provision:*** Private

***Population size:*** Various sizes. At present more than 750 ACOs in the US serving around 20 million people.
***Population description:*** System level model which covers all care for the insured residents in a given geographical area.

***Monetary size****:* Capitated budget under a contractual arrangement with an insurer.
***Existing/Additional funding****:* Existing
***Service included****:* System-level approach with full-insurance coverage for a broad set of services through a single or group of integrated providers accountable for population health.

***Place based:*** No

***Study Design:*** Various evaluations of ACOs have been performed over the years. These include both qualitative and quantitative studies.
***Summary of findings:*** Overall, on average, tend to report reduced cost without reducing quality. But at times increased costs due to identification of unmet healthcare needs

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### ACO example: Kaiser Permanente, USA [13]

***Country health system type:*** Private Health System
***Regulation:*** Private
***Financing***: Private
***Provision:*** Private

***Population size:*** 8.7 million people in eight regions.
***Population description:*** All the insured individuals in that specific geographical area

***Monetary size****:* Capitation payment.
***Existing/Additional funding****:* Existing
***Service included****:* System level approach covering a broad set of services but mainly primary care.

***Place based:*** No

***Study Design:*** Various evaluations, both quantitative and qualitative
***Summary of findings:*** Recognized as one of the top-performing health systems in the US - e.g. one of the lowest cost healthcare providers in most of the regional markets where it competes. Compared to the NHS a third of the bed use for about the same cost.

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### ACO example: The Veterans Health Administration (VA), USA [13]

***Country health system type:*** Private Health System
***Regulation:*** Private
***Financing***: Private
***Provision:*** Private

***Population size:*** Regioinally based
***Population description:*** Older people, often with complex needs

***Monetary size****:* Capitation payment.
***Existing/Additional funding****:* Existing
***Service included****:* System level approach covering a broad set of services but including both primary and secondary care.

***Place based:*** No

***Study Design:*** Various evaluations, both quantitative and qualitative
***Summary of findings:*** Reduced hospital bed days by 55 per cent with no adverse health outcomes.

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### ACO example: Geisinger Health System, USA [13]

***Country health system type:*** Private Health System
***Regulation:*** Private
***Financing***: Private
***Provision:*** Private

***Population size:*** A population of 2.6 million people in North East Pennsylvania (older, more rural and in worst health condition than the national average).
***Population description:*** People with high healthcare needs

***Monetary size****:* Bundled payments
***Existing/Additional funding****:* Existing
***Service included****:* System level approach covering a broad set of services but including both primary and secondary care.

***Place based:*** No

***Study Design:*** Various evaluations, both quantitative and qualitative
***Summary of findings:*** Climbed from the 45th percentile to the 78th in terms of productivity at National level between 2001 and 2005. Patient satisfaction has also increased.

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### Rovereto and Vittorio Veneto models, Italy [7, 28]

***Country health system type:*** National Health Insurance
***Regulation:*** State
***Financing***: State
***Provision:*** Private

***Population size:*** 35,000 in Rovereto (a total of 200 study participants receiving home health services)
***Population description:*** Community-dwelling frail older people based in the local municipalities of Rovereto and Vittorio Veneto in the north-east of Italy.

***Monetary size****:* n/a
***Existing/Additional funding****:* n/a
***Service included****:* Broad range of services including a hospital geriatric unit, a long-term care facility, and home care services.

***Place based:*** No

***Study Design:*** Randomised Control Trial
***Summary of findings:*** Reductions in acute hospital admissions, decreases both in use of community services and use of institutional services. Overall cost-effective with savings estimated at Lire 1,125 per person per year.

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## 4.1 National examples

Besides the Better Care Fund (BCF), the national literature is largely descriptive. We previously evaluated the BCF using quasi-experimental methods, finding no effect at the whole population level but some evidence of additional stimulation of integration activity [17].

Much of the national description is also written in the future tense, so not completely obvious it has yet been successfully implemented as planned. In previous qualitative evaluation at two Vanguard sites which planned to integrate budgets, for example, stakeholders described various barriers to implementation as planned, including potential conflict with national policy directives [18].

### 4.2.1 Specific national case examples

Better Care Fund [14, 17, 29]

***Organisations involved:*** 150 Health and Wellbeing Boards (CCGs and local commissioner).

***Size of budget:*** £5.8 Billion total in 2016/17, but small proportion of each area's budgets

***Services covered:*** Health and social care services

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Sheffield [9, 13]

***Organisations involved:*** Sheffield CCG and Sheffield City Council

***Size of budget:*** £270 million

***Services covered:*** Preventive care, independent living solutions.

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Northern, Eastern and Western Devon and Plymouth [9, 13]

***Organisations involved:*** Northern, Eastern and Western Devon CCG and Plymouth City Council

***Size of budget:*** A total of £460 million (£131 million from the council and £331 million net contribution from the CCG)

***Services covered:*** Wellbeing, children and young people, complex

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Dorset, Bournemouth and Poole [9, 13]

***Organisations involved:*** Dorset County Council, with Bournemouth and Poole Councils and Dorset CCG

***Size of budget:*** Better Care Fund pooled budget

***Services covered:*** Health and social care services for adults and older people across the three local authority areas

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Southend [13]

***Organisations involved:*** Southend Borough Council, NHS Southend Clinical Commissioning Group (CCG), South Essex Partnership University NHS Foundation Trust (SEPT).

***Size of budget:*** Integrated Care and Support Pioneers Programme

***Services covered:*** All the health and social care system. Particularly patients with high care need.

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Greater Manchester [9, 13, 14]

***Organisations involved:*** Association of Greater Manchester Authorities(represent 10 local authorities), the 12 Greater Manchester CCGs and NHS England

***Size of budget:*** £6 billion

***Services covered:*** Devolution of all health and care responsibilities

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Scotland [9, 13-15, 30]

***Organisations involved:*** Public Bodies

***Size of budget:*** £7.7 billion

***Services covered:*** All adult social care services, adult community health services and a proportion of adult hospital services

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Torbay [13]

***Organisations involved:*** Torbay council and the primary care trust (PCT).

***Size of budget:*** n/a

***Services covered:*** Adult social care and community health services. Five integrated social care teams organized in localities and aligned with GPs to meet the needs of older people.

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North East Lincolnshire [9]

***Organisations involved:*** North East Lincolnshire CCG and North East Lincolnshire Council

***Size of budget:*** n/a

***Services covered:*** Health and social care

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# 5. Discussion

We found very few examples of fully 'place-based' budgets, covering a whole geographical population rather than a population segment. This is probably, at least partially, due to the vastly different health system contexts internationally. Insurance-based systems, for instance, will define population in terms of coverage rather than all-inclusive geography.

There is, frequently, very little detail given when describing the budgets, so it is extremely difficult to fully compare them, especially in terms of practical implementation elements. This is probably to do with the space provided to do so within reports/publications, and also that pooled budgets don't tend to happen in isolation but alongside wider organisational, payment and service delivery changes, which can tend to be the focus of description.

Although not the primary aim of this report, we found limited evidence that integrating health and social care budgets satisfies the triple aim of improving patient experience, improving health

outcomes, and reducing costs. Health outcomes showed little improvements while costs, at times, increased due to the fact integrating funds uncovered unmet health needs. However, some appear to have managed a cost-neutral shift in costs from secondary to primary care over time. The evidence base is still evolving, particularly long-term studies and ability to separate the effects of integrating funds from other delivery changes is extremely difficult/ impossible. Much of the current evidence is from RCTs, which might further limit generalisability of the results outside of the context of a well-controlled trial. Nevertheless, there is some hypothesis in the literature that integrated funds might be a necessary enabler to allow broader system changes to occur, as was exemplified in the case of Norrtalje in Sweden.

Examples in the UK tend to come from the non-academic literature and are not obviously fully implemented in many cases. Those that are, such as through the Better Care Fund, tend to pool relatively small amounts of existing total budgets for ring-fenced spending and, probably because of this, result in little measurable effect. This is partly a consequence of the organisational differences between the NHS and the social care system in terms of funding (tax-funded NHS versus more complicated means-tested social care), governance and accountability. This remains a national policy issue and it is unclear how much progress can be made without this alignment.

Other key considerations when thinking about 'place':

- **Provider overlap with the selected commissioning geography.** One of the themes of successful implementation of pooled budgets, in the examples of Sweden and ACOs in the US above for instance, seems to be the simultaneous simplification of the provider landscape into a single/integrated group. Partly, this might be to quell powerful 'losers' as funding flows are changed. Without this, it seems alignment of geographical footprints is, at least, a pre-requisite. This might be a problem in some regions in England. For example, NHS England outline PCNs as a key part of 'place', but a recent analysis of PCN geographies showed "all practices had joined a single PCN in [only] three (2%) [of] commissioning regions" [31]. 'Ideal' size of PCNs was set at 30-50K, so not too surprising but with implications for contracting and co-ordination. Without this overlap, it becomes more complicated to deal with multiple contracts, sometimes for proportions of the total population to whom the provider provides services.
- **Variations in population need across 'place' influence the appropriate provider mix and allocated budget.** Depending on which budgets are pooled and for which geographical population, the needs are likely to be very different. It is not obvious how much existing allocation formulas will adequately assign a risk-adjusted budget for all service needs. Particularly, since primary care and social care are currently separately allocated. Also, as described in the insurance literature, in general, the larger the risk pool the more predictable and stable the spend is.

On their own, pooled budgets are very commissioning-focused policy. This is similar to the Health and Social Care Act 2012, which vastly changed the commissioning, but less so the provider landscape. It remains to be seen how much can be changed in terms of the behaviour of providers if

their organisational structures/(activity-based, according to national tariff) payments and incentives do not also change. This is particularly true if there aren't clear shared savings to be made on the commissioning side to at least incentivise a different mix of commissioned providers. How much system and population outcome change can be achieved with pooled, place-based, budgets alone?

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31. Morciano, M., et al., *Variability in size and characteristics of primary care networks in England: observational study.* British Journal of General Practice, 2020: p. bjgp20X713441.

# 7. Appendicies

## 7.1 Search Strategy

### 7.1.1 Database search

**Ovid MEDLINE(R)** 1996 to June Week 2 2020.
Searched on the 26th of June 2020

Text-words (title or abstract)

1. (pool* adj4 budget*).tw. (29)
2. (single payer*).tw. (459)
3. (co-financing).tw.(42)
4. (joint commissioning).tw.(19)
5. (integrat* fund*).tw.(49)
6. (align* budget*).tw. (4)
7. (place-based budget*).tw.(0)
8. (global budget*).tw. (259)
9. (accountable care organization*).tw.(1080)
10. (integrated system* of care).tw.(87)
11. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 (2031)

**MeSH terms**

12. Exp Healthcare Financing (898)
13. Exp Budgets/ og [organization & administration]
14. Exp Budgets/ sn [ Statistics and Numerical data]
15. Exp "Delivery of Health Care"/ec [Economics] (41215)
16. Exp "Delivery of Health Care"/og [Organization & Administration] (53781)
17. Exp "Delivery of Health Care, Integrated"/ec [Economics] (1751)
18. Exp "Delivery of Health Care, Integrated"/og [Organization & Administration] (6073)
19. Exp social work /ec [economics] (438)
20. Exp social work/og [organization and administration] (2112)
21. Exp state medicine/ec [economics] (39673)
22. Exp Health Facilities/ec [Economics] (29445)
23. Exp state medicine / og [Organization administration] (13348)
24. Exp health care costs /sn [Statistical and numerical data] (12900)
25. Exp Health Care Reform/ec [Economics] (4127)
26. Exp Health Care Reform/og [Organization & Administration] (4976)
27. Exp Economics, Hospital/og [Organization & Administration] (630)
28. Exp Health Policy (84955)

29. Exp Hospitals, public / sn [Statistics and numeric DATA] (3997)
30. Exp Economics, Medical (3814)

31. 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 2 or 27 or 28 or 29 (229541)

32 11 and 31 (1069)

33 limit 32 to (English language and "review articles" and yr="2000 -Current") (92)

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**Ovid EMABSE** 1996 to June Week 2 2020.
Searched on the 26th of June 2020

Subjects Headings

1. exp budget/ or exp financial management/ (357545)
2. health care financing/ (10861)
3. health care delivery/ (143270)
4. social work/ (16848)
5. national health service/ (53042)
6. health care organization/ (99989)
7. social work/ (16848)
8. health care facility/ (56050)
9. health care cost/ (173957)
10. exp health care policy/ or exp health care practice/ (173897)
11. funding/ (45870)
12. health economics/ (21320)
13. evidence based practice/ (64570)
14. information system/ (27319)
15. hospital service/ (10506)
16. hospital cost/ (19547)
17. social care/ (8571)

Text-words same as Medline plus review (no filter in EMBASE)

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**EconLit** from 1996 to June Week 2 2020.
Searched on the 26th of June 2020

Free text word search (full text, both peer-reviewed and non per-reviewed literature, English language )

1. (pool* budget*).tw
2. (integrat* fund*).tw
3. (placed based budget*)

4. (single payer)
5. (global budgets)
6. (accountable care organization*)
7. (integrated system of care)
8. (co financing)
9. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 (694)
10. narrow by subjects: health government policy; regulation; public health (140); national government expenditures and health (81); health insurance, public and private (67); state and local government: health; education; welfare; public pensions (39); national budget, budget systems (22); analysis of health care markets (137)
11. final hit count: 242
12. results limited to review articles: 9

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**Google Scholar** from 1996 to June Week 2 2020.
Searched on the 26th of June 2020

Free text word advanced search using the following terms: pooled budgets, integrated funds, global budget, single payer, place - based budgets and related terms for each text word. Result limited to review article.

Record Screened: 38 pages
Record included: 31

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**Grey literature search**
The Kings Fund

Record included: 4

SCIE

Record included: 2

Hand-search from included publications: 3

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### 7.1.2 Inclusion and exclusion criteria

**Inclusion criteria**

1. Academic publications and non-peer reviewed literature (reports, web-based guidelines, conference proceedings) which describe practical examples of pooled-budgets across

various healthcare settings as defined by Mason et al. 2019, i.e. each partner makes contribution to a common fund for spending on agreed project and service in order to achieve shared outcomes. Both academic publications and grey literatures search will be limited to review articles.

2. Scientific articles or grey literature sources with sufficient details to determine whether the pooled-budget programme passed the planning stage and was actually implemented in a real-world setting
3. Any type of spending (healthcare, health and social care, public health)
4. English Language
5. Only studies published after 1995
6. Any kind of scope (broad set of services vs single service)
7. Any type of funds independently from its associated model of integrated care
8. Quantitative, qualitative and mixed methods studies

**Exclusion criteria**

1. Schemes which exclusively integrated resources i.e. staff, facilities, equipment, know-how
2. Sources with lack of details to determine whether the pooled-funding initiative passed the planning stage
3. Articles where the main focus was not description of pooled-budgets arrangements or similar form of financial integration programmes
4. Articles with insufficient information to determine whether they meet the inclusion criteria
5. Commentaries and opinion pieces

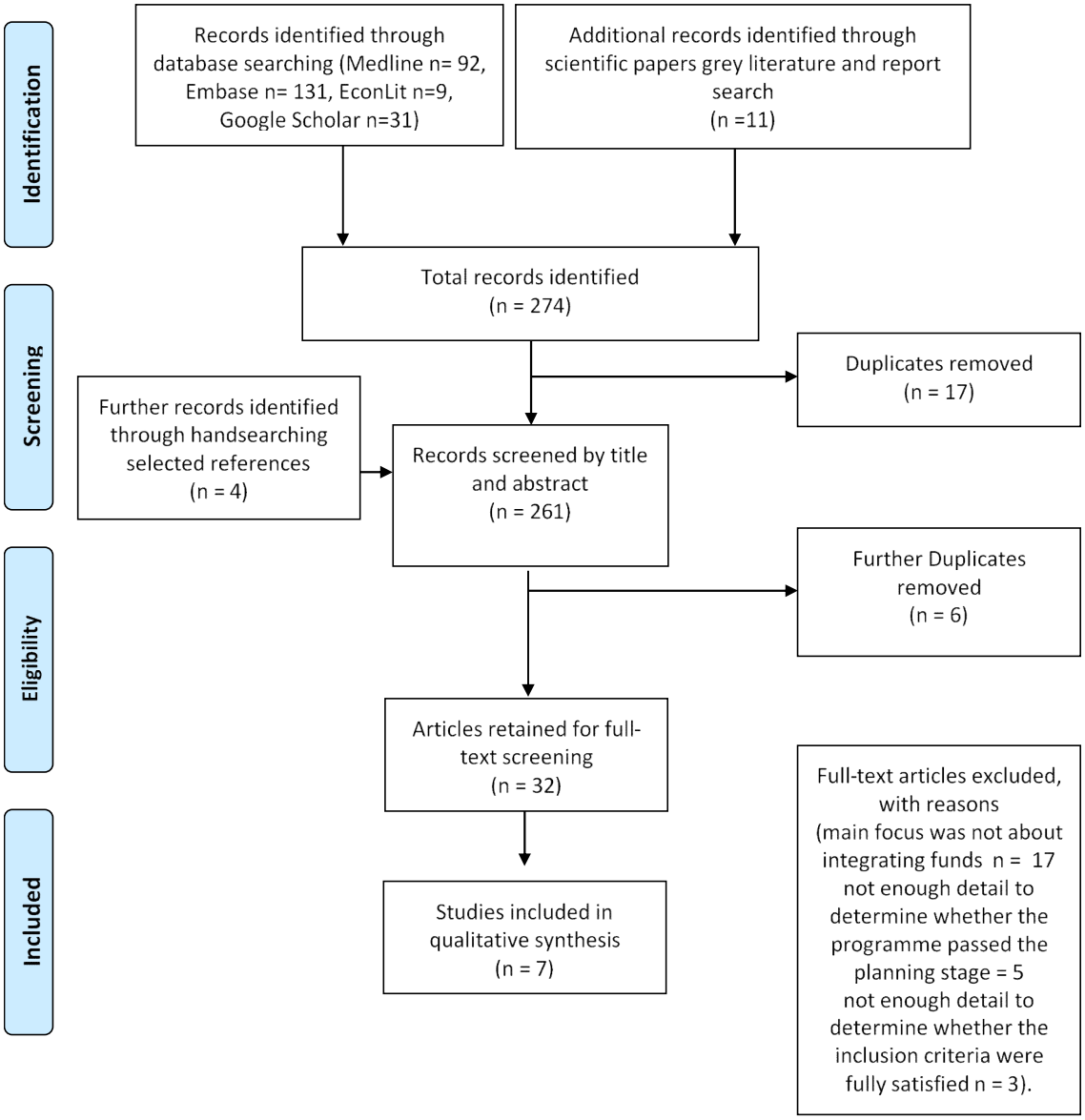
### 7.1.3 Academic reviews included

A systematic review by McGuire et al. 2019, describes international examples of co-financing models in intersectoral action for health. This review contains a specific section on pooled budgets for health and social care, their operational modalities and their enablers and barriers [10]. Mason et al. 2015 describe the different modalities for integrating funds for health and social care which also describes several core examples of 'pooled budgets' included in the current work [11]. Beland et al. 2011 focus on international models of care delivery for the frail elderly [7].

### 7.1.4 Non-academic literature included

A report by Humphries and Wenzel explores examples for joint-commissioning health and social care and how this could give rise to 'place-based budgets' of care [9]. It also contains a summary of the survey as part of 'The Barker Commission' which asks national stakeholders about their preferred types of financial integration together with strengths and weaknesses of each of them. Additional work by Ham and Alderwick, 2015 on the current developments of 'place-based budgets' for care and report by Curry and Ham, 2011 on the different mechanisms available for integrating services in health and socal care [13, 14]. Finally, another report which describes the experiences from Scotland for integrating care was included [15]

## 7.2 PRISMA Flow Diagram




**For more information, please contact jonathan.m.stokes@manchester.ac.uk**
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