

# Opportunities and challenges in integrating care

Ben Collins

NICE Annual Conference

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# Mrs Collins – 88, independent, stubborn



- Lives on her own
- Rheumatoid arthritis
- Compromised immune system
- Mobility challenges
- Out of control dog

# Enemy No 1 – Complexity



# If we want different outcomes, we need a different system

From ....	.... To
Specialised staff roles	Generalist staff roles
Engaging with many services	Engaging with one small team
Triage, treatment, discharge	Continuity-based models
Referring out	Specialist advice in
Pathways and tasks	What would help most today
Transactions between staff	Quick conversations on what to do



# Southcentral Foundation, Alaska



# Underlying efficiencies of generalist, team-based primary / community models

Relationships

Avoiding duplication

Making best use of staff

Continuity

Reducing transitions

Deploying the right staff member

Holistic Care

Coordination & transaction costs

Extending team members' skillsets

Oversight and support

Accountability, learning and improvement

# Mindsets, tools and reflexes that led to our current system

Specialisation

Pathways

Risk stratification

Economies of scale

Episodic models

Individual action

Programmes

Segmentation

Quick Fixes

# How evidence has contributed to our complex and fragmented system

## Joint Statement RCEM and SAM regarding Same Day Emergency Care (SDEC)

9 January 2024

This statement is a follow up to the joint statement issued in 2019 by the Royal College of Emergency Medicine (RCEM) and the Society for Acute Medicine (SAM) regarding the delivery of same day emergency care (SDEC) in England following the launch of the 2019 Long Term Plan for the NHS in England.

Since 2019 due to the global COVID-19 pandemic, some SDEC services were paused to allow estate and staff to be utilised for clinical services. SDEC services are being restored, and many improvements have been made. However, we are aware that in the acute care system, some SDEC services are being utilised for activity that does not meet the remit of same day emergency care.

In England, over 75% of acute hospitals are meeting the national requirement of having 12 hours a day, 7 days per week SDEC places for medicine and surgery and 70 hours per week for frailty. Whilst SDEC spans multiple specialities such as paediatrics, oncology the largest cohort of patients are seen by clinicians with a background in Acute, Emergency or Older peoples (Frailty). To deliver effective SDEC services we need to break down barriers between professional groups and 'silo working'. We encourage working in acute care to work together to develop their SDEC services, using local expertise, workforce and organisational structure approach is explicitly supported by the NHS and the National Delivery plan for recovering urgent and emergency care services (England, 2023).

The benefits of effective SDEC delivery to teams working "at the front door" to deliver acute care include reducing unwarranted care pathways, streamlining the patient journey, better patient and staff satisfaction, reduction in admission rates and enhanced flow in the acute admission pathway.

We hope that the following points, updated from the 2019 statement, dispel some rumours, myths and concerns around SDEC:

- The definition of Same day emergency care (SDEC) is to allow specialists, where possible, to care for patients within the same arrival as an alternative to hospital admission, removing delays for patients requiring further investigation and/or treatment. This process can occur in several settings including a designated SDEC unit or a specific SDEC area next to the Emergency Dept traditionally, but not exclusively under the auspices of the Acute Medical team. This model should be updated to reflect a leadership and operational approach between AIM and EM. This care would usually be delivered within an 8-hour time frame spread out over more than one day if a pathway indicates this. However, the hallmark remains that the patient sleeps in bed and not an inpatient hospital one.
- The ambition established in the NHS Long Term Plan (2019) and the NHSE delivery plan for recovering urgent and emergency services (2023) include implementation SDEC services, 12 hours a day, 7 days a week in every hospital with a 'type 1' (core 24 hour) ED and, in addition to provide 70hrs of a defined acute frailty service per week.
- SDEC should facilitate the right patients with acute healthcare needs to be treated by the right clinician at the right time in condition and is intended to bring about a positive experience and achieve the best outcomes for that patient.
- Diagnostics capacity for unplanned activity must be available 7 days per week with equal access as ED timeframes. No special should delay accepting a referral into or from SDEC based on diagnostic results or capacity/availability.
- SDEC is not an alternative facility to be used for patients awaiting diagnostics or investigation.

## Remote home monitoring (virtual wards) for confirmed or suspected COVID-19 patients: a rapid systematic review

Cecilia Vindrola-Padros <sup>1</sup>, Kelly E Singh <sup>2</sup>, Manbinder S Sidhu <sup>2</sup>, Theo Georgiou <sup>3</sup>, Chris Sherlaw-Johnson <sup>3</sup>, Sonila M Tomini <sup>4</sup>, Matthew Inada-Kim <sup>5</sup>, Karen Kirkham <sup>6</sup>, Allison Streetly <sup>7, 8</sup>, Nathan Cohen <sup>9</sup>, Naomi J Fulop <sup>4</sup>

Affiliations + expand

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### Abstract

**Background:** the aim of this review was to analyze the implementation and impact of remote home monitoring models (virtual wards) for confirmed or suspected COVID-19 patients, identifying their main components, processes of implementation, target patient populations, impact on outcomes, costs and lessons learnt.

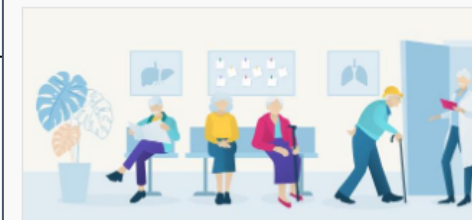
**Methods:** we carried out a rapid systematic review on models led by primary and secondary care across seven countries (US, Australia, Canada, The Netherlands, Ireland, China, UK). The main outcomes included in the review were: impact of remote home monitoring on virtual length of stay, escalation, emergency department attendance/reattendance, admission/readmission and mortality. The search was updated on February 2021. We used the PRISMA statement and the review was registered on PROSPERO (CRD: 4202020888).

**Findings:** the review included 27 articles. The aim of the models was to maintain patients safe in the appropriate setting. Most models were led by secondary care and confirmation of COVID-19 was not required (in most cases). Monitoring was carried via online platforms, paper-based systems with telephone calls or (less frequently) through wearable sensors. Models based on phone calls were considered more inclusive. Patient/carer training was identified as a determining factor of success. We could not reach substantive conclusions regarding patient safety and the identification of early deterioration due to lack of standardized reporting and missing data. Economic analysis was not reported for most of the models and did not go beyond reporting resources used and the amount spent per patient monitored.

**Interpretation:** future research should focus on staff and patient experiences of care and inequalities in patients' access to care. Attention needs to be paid to the cost-effectiveness of the models and their sustainability, evaluation of their impact on patient outcomes by using comparators, and the use of risk-stratification tools.

## Learning about what works in urgent community response

PRIMARY COMMUNITY AND SOCIAL CARE SERVICES, URGENT AND EMERGENCY CARE



NHS England commissioned the Strategy Unit at NHS UK and Partners Ipsos UK to conduct a multi-year, two-phase Urgent Community Response (UCR). This national evaluation is the first of its kind to try to demonstrate the impact of UCR on patient care and will build evidence of what works best.

This initial phase of the evaluation includes a process evaluation and report and an economic modelling tool (to be shortly), which are the key outputs from the first year and a half of the evaluation.

The final phase of the evaluation will be published in spring 2024 and include: key learnings from implementing UCR for policy changes to support Integrated Care Boards to understand what works best; an updated economic model; impact evaluation, which will focus on how UCR has met the needs of individuals and prevented further clinical contact as well as UCR's impact on Urgent and Emergency Care.

### Background on UCR and the national evaluation

The 2-hour urgent community response (UCR) standard requires all Integrated Care Systems (ICSs) to assess, treat people aged over 18 experiencing health and/or social care crises in the place they call home, including care home risk of hospital admission. The service has been implemented across England since the first UCR 'activation' sites (April 2022), each ICS has been required to provide a consistent service from 8am-8pm, seven days a week across its geography.

UCR is central to the NHS Long Term Plan ambition to provide the right care, at the right time, to people closer to where they live. It remains a core element of strategies to manage winter pressures, recover from COVID-19 and further shift resource and community-based services.

As set out in the [2023/24 System Planning guidance](#), providers have been asked to increase referrals into UCR services to respond to the following nine clinical conditions, at a minimum:

Falls	Decompensation of frailty	Reduced function or mobility
Palliative or end of life urgent care	Urgent equipment provision	Delirium
Urgent catheter care	Urgent support for diabetes	Unpaid carer breakdown



## The RCEM Ambulatory Emergency Care toolkit

Delivering same day emergency care from the ED



# The evidence we need to implement more effective care models

International Journal of Environmental Research and Public Health

MDPI

## The Effectiveness of Patient-Centred Medical Home-Based Models of Care versus Standard Primary Care in Chronic Disease Management: A Systematic Review and Meta-Analysis of Randomised and Non-Randomised Controlled Trials

James Rufus John <sup>1,2,\*</sup>, Hir Jani <sup>1</sup>, Kath Peters <sup>3</sup>, Kingsley Agho <sup>1,4</sup> and W. Kathy Tannous <sup>1,4,5</sup>

<sup>1</sup> Translational Health Research Institute, Western Sydney University, Sydney, NSW 2560, Australia; H.j.john@westernsydney.edu.au (H.J.); K.A.gho@westernsydney.edu.au (K.A.); k.tannous@westernsydney.edu.au (W.K.T.)

<sup>2</sup> Rosetta Institute, Level 4, 55 Harrington Street, Sydney, NSW 2000, Australia

<sup>3</sup> School of Nursing and Midwifery, Western Sydney University, Sydney, NSW 2560, Australia; K.Peters@westernsydney.edu.au

<sup>4</sup> School of Science and Health, Western Sydney University, Sydney, NSW 2560, Australia

<sup>5</sup> School of Business, Western Sydney University, Sydney, NSW 2150, Australia

\* Correspondence: 183142@student.westernsydney.edu.au

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Abstract: Patient-centred care by a coordinated primary care team may be more effective than standard care in chronic disease management. We synthesised evidence to determine whether patient-centred medical home (PCMH)-based care models are more effective than standard general practitioner (GP) care in improving biomedical, hospital, and economic outcomes. MEDLINE, CINAHL, Embase, Cochrane Library, and Scopus were searched to identify randomised (RCT) and non-randomised controlled trials that evaluated two or more principles of PCMH among primary care patients with chronic diseases. Study selection, data extraction, quality assessment using Joanna Briggs Institute (JBI) appraisal tools, and grading of evidence using Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) approach were conducted independently. A quantitative synthesis, where possible, was pooled using random effects models and the effect size estimates of standardised mean differences (SMD) and odds ratios (ORs) with 95% confidence intervals were reported. Of the 13,820 citations, we identified 78 eligible RCTs and 7 quasi trials which included 60,617 patients. The findings suggested that PCMH-based care was associated with significant improvements in depression episodes (SMD -0.24; 95% CI -0.35, -0.14; I<sup>2</sup> = 76%) and increased odds of remission (OR 1.79; 95% CI 1.46, 2.21; I<sup>2</sup> = 0%). There were significant improvements in the health-related quality of life (SMD 0.10; 95% CI 0.04, 0.15; I<sup>2</sup> = 51%), self-management outcomes (SMD 0.24; 95% CI 0.03, 0.44; I<sup>2</sup> = 83%), and hospital admissions (OR 0.83; 95% CI 0.70, 0.98; I<sup>2</sup> = 0%). In terms of biomedical outcomes, with exception to total cholesterol, PCMH-based care led to significant improvements in blood pressure, glycated haemoglobin, and low-density lipoprotein cholesterol outcomes. The incremental cost of PCMH care was identified to be small and significantly higher than standard care (SMD 0.17; 95% CI 0.08, 0.26; I<sup>2</sup> = 82%). The quality of individual studies ranged from “fair” to “good” by meeting at least 60% of items on the quality appraisal checklist. Additionally, moderate to high heterogeneity across studies in outcomes resulted in downgrading the included studies as moderate or low grade of evidence. PCMH-based care has been found to be superior to standard GP care in chronic disease management. Results of the review have important implications that may inform patient, practice, and policy-level changes.

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## The Patient-Centered Medical Home: A Systematic Review

Authors: George J. Jackson, PhD, MPH; Benjamin J. Powers, MD, MHS; Brian Chalmers, MD, MPH; Sarah Pava, ScD; Alex R. Kemper, MD, MPH; MD, VA; Heather B. Ford, MD; Robert J. Doherty, MD, MPH; R. Julian Irvine, MCh, DipMedEd; Heidi H. Hays, MD, MPH; PhD; Amy S. Friedman, RN, MSN; Rebecca Gray, DPhil; and John W. Williams, Jr., MD, MHS. | [Article Info](#) | [References](#) | [Cite](#) | [Permissions](#)

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### Abstract

**Background:** The patient-centered medical home (PCMH) describes mechanisms for organizing primary care to provide high-quality care across the full range of individuals' health care needs. It is being widely implemented by provider organizations and third-party payers.

**Purpose:** To describe approaches for PCMH implementation and summarize evidence for effects on patient and staff experiences, process of care, and clinical and economic outcomes.

**Data Sources:** PubMed (through 6 December 2017), Cumulative Index to Nursing & Allied Health Literature, and the Cochrane Database of Systematic Reviews (through 29 June 2012).

**Study Selection:** English-language trials and longitudinal observational studies that met criteria for the PCMH, as defined by the Agency for Healthcare Research and Quality, and included populations with multiple conditions.

**Conclusion:** The PCMH holds promise for improving the experiences of patients and staff and potentially for improving care processes, but current evidence is insufficient to determine effects on clinical and most economic outcomes.

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ORIGINAL PAPER

## Cost and effects of integrated care: a systematic literature review and meta-analysis

Stephen Rocks<sup>1</sup>, Daniela Bertoni<sup>1</sup>, Alejandro Gil-Salmorón<sup>2</sup>, Mudathira Kudu<sup>3</sup>, Nieves Ehrenberg<sup>4</sup>, Viktoria Stein<sup>5</sup>, Apostolos Tsiachristas<sup>1</sup>

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**Abstract**  
**Background** Health and care services are becoming increasingly strained and healthcare authorities worldwide are investing in integrated care in the hope of delivering higher-quality services while containing costs. The cost-effectiveness of integrated care, however, remains unclear. This systematic review and meta-analysis aims to appraise current economic evaluations of integrated care and assesses the impact on outcomes and costs.  
**Methods** CINAHL, DARE, EMBASE, Medline/PubMed, NHS EED, OECD Library, Scopus, Web of Science, and WHOLIS databases from inception to 31 December 2019 were searched to identify studies assessing the cost-effectiveness of integrated care. Study quality was assessed using an adapted CHEERS checklist and used as weight in a random-effects meta-analysis to estimate mean cost and mean outcomes of integrated care.  
**Results** Selected studies achieved a relatively low average quality score of 65.0% (± 18.7%). Overall meta-analyses from 34 studies showed a significant decrease in costs (0.94, CI 0.90–0.99) and a statistically significant improvement in outcomes (1.06, CI 1.05–1.08) associated with integrated care compared to the control. There is substantial heterogeneity in both costs and outcomes across subgroups. Results were significant in studies lasting over 12 months (12 studies), with both a decrease in cost (0.87; CI 0.80–0.94) and improvement in outcomes (1.15; 95% CI 1.11–1.18) for integrated care interventions; whereas, these associations were not significant in studies with follow-up less than a year.  
**Conclusion** Our findings suggest that integrated care is likely to reduce cost and improve outcome. However, existing evidence varies largely and is of moderate quality. Future economic evaluation should target methodological issues to aid policy decisions with more robust evidence on the cost-effectiveness of integrated care.

**Keywords** Cost-effectiveness · Economic evaluation · Integrated care; meta-analysis

### Introduction

Governments across high-income countries are challenged to contain the relentless increase in health expenditure, which is partly driven by ageing populations and an associated increase in the prevalence of chronic disease [1]. This challenge is increasingly concerning as many health systems have become highly specialised, fragmented and poorly set to manage the growing burden of multimorbidity [2]. Increasing efficiency in care delivery by integrating health services has been proposed as a solution to healthcare budget issues [3–5]. Integrated care is an umbrella term that encompasses a diverse set of methods and models that facilitate improvement in patient experience through enhanced coordination and continuity of care [6, 7]. As such, integrated care covers a wide range of treatment plans and organizational

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## The Effectiveness of Patient-Centred Medical Home-Based Models of Care versus Standard Primary Care in Chronic Disease Management: A Systematic Review and Meta-Analysis of Randomised and Non-Randomised Controlled Trials

by James Rufus John <sup>1,2,\*</sup>, Hir Jani <sup>1</sup>, Kath Peters <sup>3</sup>, Kingsley Agho <sup>1,4</sup> and W. Kathy Tannous <sup>1,4,5</sup>

<sup>1</sup> Translational Health Research Institute, Western Sydney University, Sydney, NSW 2560, Australia

<sup>2</sup> Rosetta Institute, Level 4, 55 Harrington Street, Sydney, NSW 2000, Australia

<sup>3</sup> School of Nursing and Midwifery, Western Sydney University, Sydney, NSW 2560, Australia

<sup>4</sup> School of Science and Health, Western Sydney University, Sydney, NSW 2560, Australia

<sup>5</sup> School of Business, Western Sydney University, Sydney, NSW 2150, Australia

\* Author to whom correspondence should be addressed.

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### Abstract

Patient-centred care by a coordinated primary care team may be more effective than standard care in chronic disease management. We synthesised evidence to determine whether patient-centred medical home (PCMH)-based care models are more effective than standard general practitioner (GP) care in improving biomedical, hospital, and economic outcomes. MEDLINE, CINAHL, Embase, Cochrane Library, and Scopus were searched to identify randomised (RCTs) and non-randomised controlled trials that evaluated two or more principles of PCMH among primary care patients with chronic diseases. Study selection, data extraction, quality assessment using Joanna Briggs Institute (JBI) appraisal tools, and grading of evidence using Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) approach were conducted independently. A quantitative synthesis, where possible, was pooled using random effects models and the effect size estimates of standardised mean differences (SMD) and odds ratios (ORs) with 95% confidence intervals were reported. Of the 13,820 citations, we identified 78 eligible RCTs and 7 quasi trials which included 60,617 patients. The findings suggested that PCMH-based care was associated with significant improvements in depression episodes (SMD -0.24; 95% CI -0.35, -0.14; I<sup>2</sup> = 76%) and increased odds of remission (OR 1.79; 95% CI 1.46, 2.21; I<sup>2</sup> = 0%). There were significant improvements in the health-related quality of life (SMD 0.10; 95% CI 0.04, 0.15; I<sup>2</sup> = 51%), self-management outcomes (SMD 0.24; 95% CI 0.03, 0.44; I<sup>2</sup> = 83%), and hospital admissions (OR 0.83; 95% CI 0.70, 0.98; I<sup>2</sup> = 0%). In terms of biomedical outcomes, with exception to total cholesterol, PCMH-based care led to significant improvements in blood pressure, glycated haemoglobin, and low-density lipoprotein cholesterol outcomes. The incremental cost of PCMH care was identified to be small and significantly higher than standard care (SMD 0.17; 95% CI 0.08, 0.26; I<sup>2</sup> = 82%). The quality of individual studies ranged from “fair” to “good” by meeting at least 60% of items on the quality appraisal checklist. Additionally, moderate to high heterogeneity across studies in outcomes resulted in downgrading the included studies as moderate or low grade of evidence. PCMH-based care has been found to be superior to standard GP care in chronic disease management. Results of the review have important implications that may inform patient, practice, and policy-level changes.

**Keywords:** patient-centred medical home; enhanced primary care; chronic disease management; collaborative care; meta-analysis