

Integrating Primary Care to improve Child Health outcomes



25th Annual National Family
Practitioners Congress

19 August 2023



Haroon Saloojee

Background

The theme of the 2023 SAAFP conference is: “Integrating Primary Care – creating a more connected health and care system”

Presentation structure – my exploration

Fundamentals

- What is integrated care?
- What is integrated Primary Health Care?
- How is successful integration measured?

Examples of integrated care for children

Evidence that integration works (or not!)

Relevance in a South African context



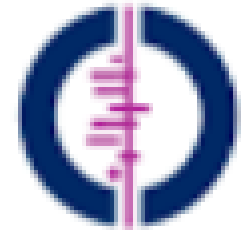
What is integrated care?



National Health Service (NHS) England defines it as ‘giving people the support they need’ and ‘removing traditional divisions’



WHO definition
The organisation and management of health services so that people get the care they need, when they need it, in ways that are user friendly, achieve the desired results and provide value for money



One Cochrane review defined integration of primary healthcare as “a variety of managerial or operational changes to health systems to bring together inputs, delivery, management and organization of particular service functions”

More ideas about integrated care



Alma-Ata
Declaration on
Primary Health
Care

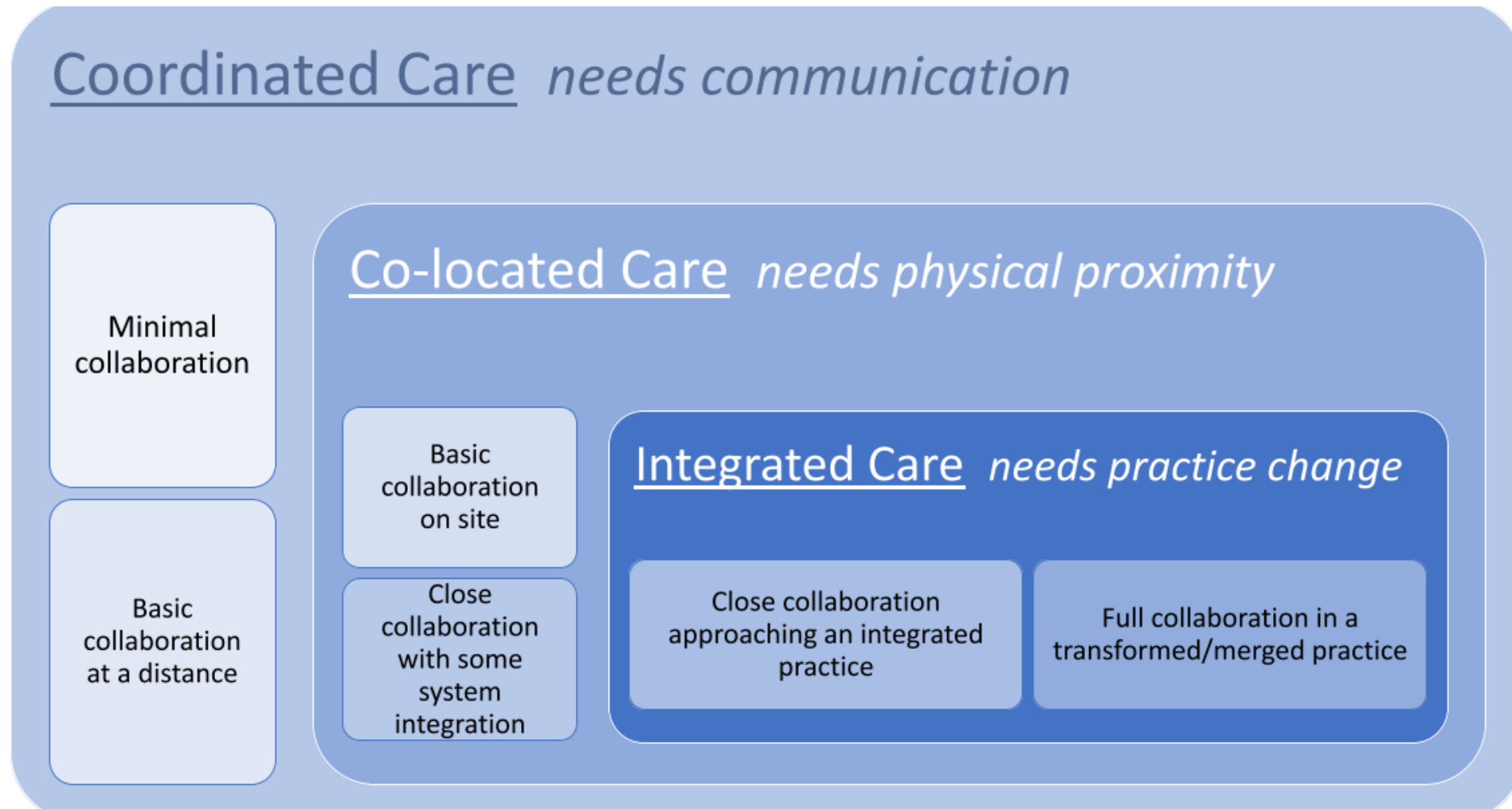


Integrated care
is complex, and
strategies can
take many
different forms,
targeting
different levels
of service
provision



Integration may
involve adding
a service to an
existing vertical
programme or
full integration
of services
within routine
healthcare
delivery.

Levels of Collaboration in models of Integrated Care



Core functions of primary care

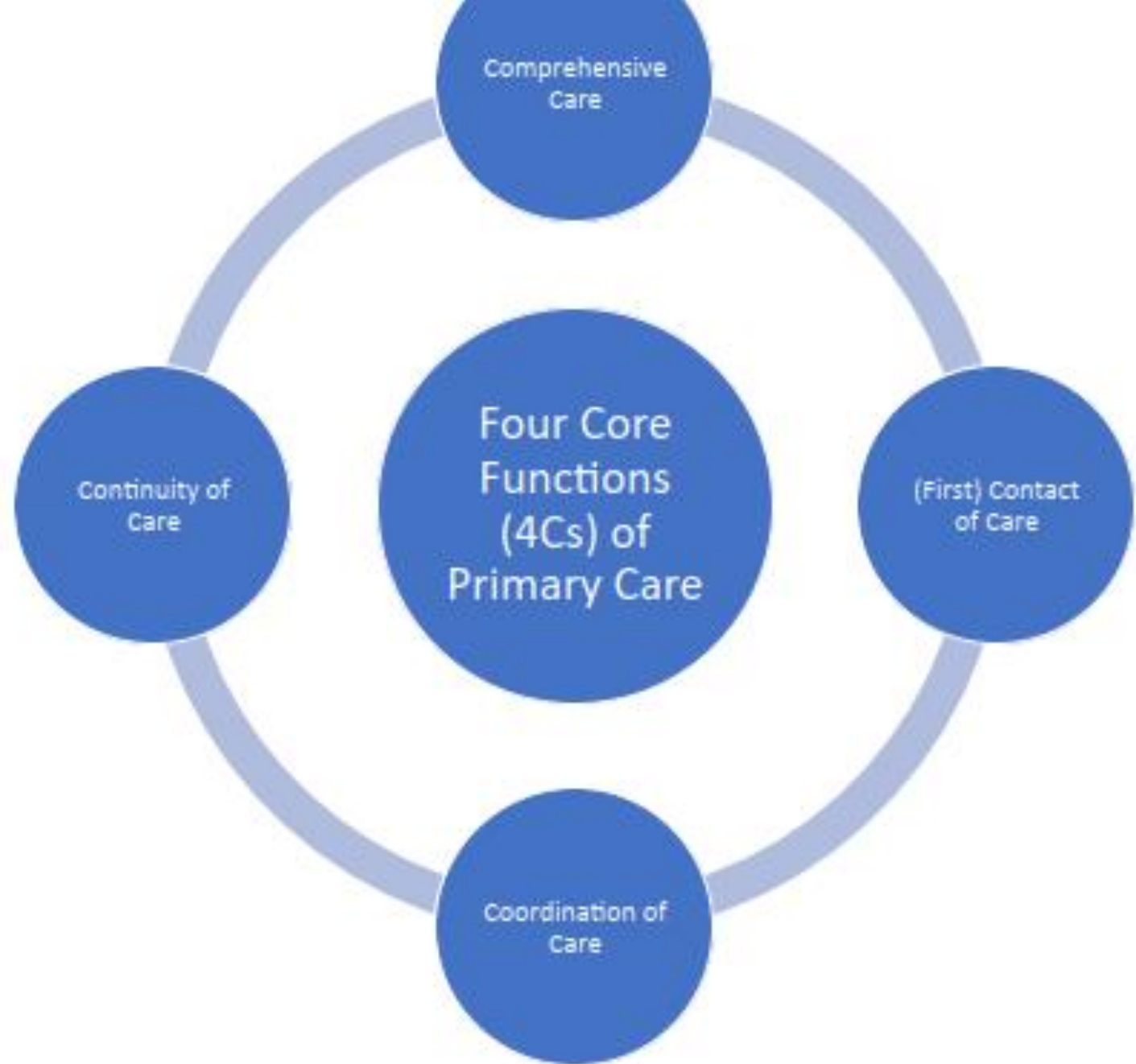


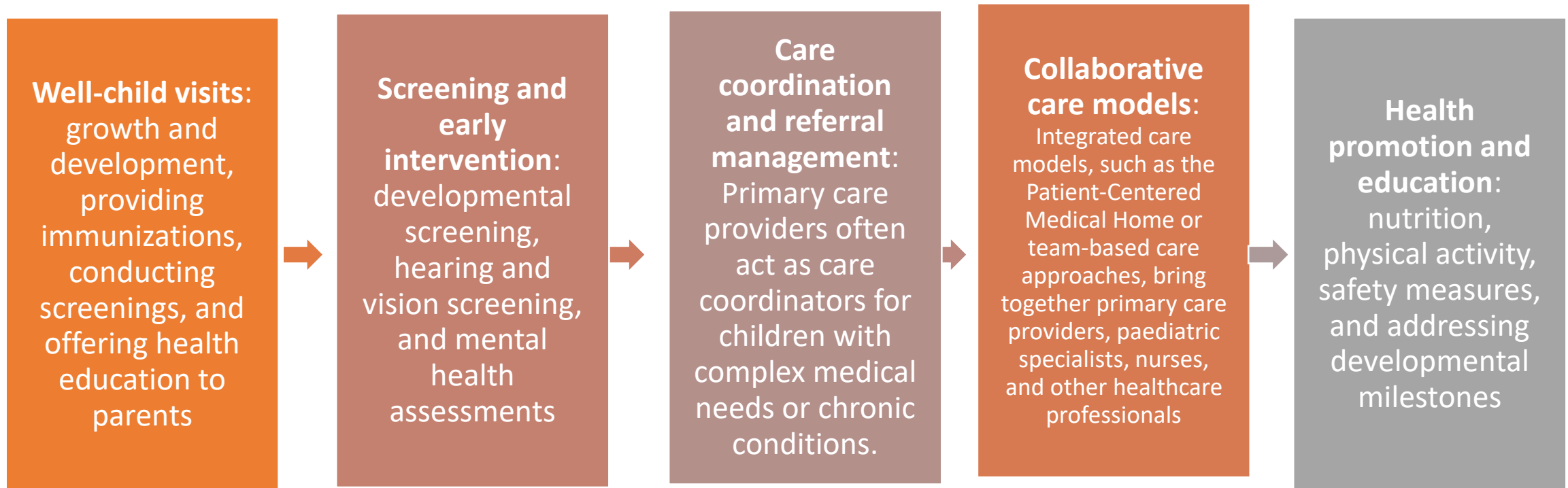
Fig. 2. The 4Cs of primary care.

Much of the published literature discusses individual conditions where integrated care is offered

The range of disorders that benefit from integrated care include:

- cancer care
- disorders involving the brain
- common chronic (long-term) conditions
- psychiatric emergencies
- chronic pain
- eating disorder treatment
- obesity management

Examples of how child health has been integrated into primary care



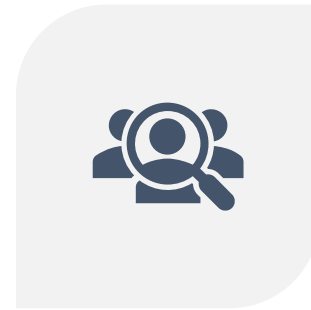
How can the benefits (outcomes) of integrated care be measured?



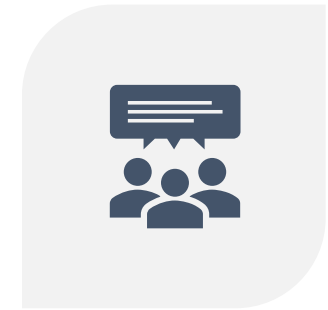
Processes and outputs
of healthcare delivery
(9 STUDIES)



Health status
(5 STUDIES)



Knowledge and
behaviours of service
users
(3 STUDIES)



Users' perceptions of
the service
(1 STUDY)



Evidence of improvements in child health outcomes through integrated primary care

Integration has little or no benefit

Strategies for integrating primary health services in low- and middle-income countries at the point of delivery

Lilian Dudley, Paul Garner

2011



RESULTS

Five randomised trials and four controlled before and after studies were included. The interventions were complex.

Authors' conclusions

There is some evidence that 'adding on' services (or linkages) may improve the utilisation and outputs of healthcare delivery. However, there is no evidence to date that a fuller form of integration improves healthcare delivery or health status. Available evidence suggests that full integration probably decreases the knowledge and utilisation of specific services and may not result in any improvements in health status.

Improved immunization rates

Interventions for improving coverage of childhood immunisation in low- and middle-income countries (Review)

Oyo-Ita A, Wiysonge CS, Oringanje C, Nwachukwu CE, Oduwole O, Meremikwu MM



Authors' conclusions

Providing parents and other community members with information on immunisation, health education at facilities in combination with redesigned immunisation reminder cards, regular immunisation outreach with and without household incentives, home visits, and integration of immunisation with other services may improve childhood immunisation coverage in LMIC. Most of the evidence

Improved developmental outcomes

BMJ Global Health

Characteristics and effects of integrated nutrition and stimulation interventions to improve the nutritional status and development of children under 5 years of age: a systematic review and meta-analysis

Sophiya Dulal ¹, Audrey Prost,² Surendra Karki,^{3,4} Naomi Saville,² Dafna Merom¹

Conclusion Integrated interventions have greater benefits for children's development than usual care or standalone nutrition interventions, especially in settings with high levels of undernutrition. Future studies should use standardised

Reduced emergency department visits and hospitalizations

The Value of the Medical Home for Children Without Special Health Care Needs

CONCLUSIONS: For children without special health care needs, the medical home is associated with improved health care utilization patterns, better parental assessment of child health, and increased adherence with health-promoting behaviors. These findings support the recommendations of the American Academy of Pediatrics and the Affordable Care Act to extend the medical home to all children.

Pediatrics 2012;129:87–98

Enhanced management of chronic conditions

Impact of integrated care coordination on pediatric asthma hospital presentations

 frontiers | Frontiers in Pediatrics

Conclusion: Our results support that care coordinator led integrated model of asthma care which enables integration of acute and primary care services and provides families with asthma resources and education can reduce asthma hospital presentations in children.

with asthma attack were enrolled in Phase II. Phase I included a suite of interventions delivered by CCs including encouraging parents/carers to schedule follow-up visits with GP post-discharge, ensuring parents/carers are provided with standard asthma resource pack, offering referrals to asthma education sessions, sending a letter to the child's GP advising of the child's recent hospital presentation and coordinating asthma education webinar for GPs. In addition, in Phase II CCs sent text messages to parents/carers reminding them to follow-up with the child's GP. We compared the change in ED visits

Integrated General Practitioner-Paediatrician care

Open access

Protocol

BMJ Open Strengthening Care for Children (SC4C): protocol for a stepped wedge cluster randomised controlled trial of an integrated general practitioner-paediatrician model of primary care

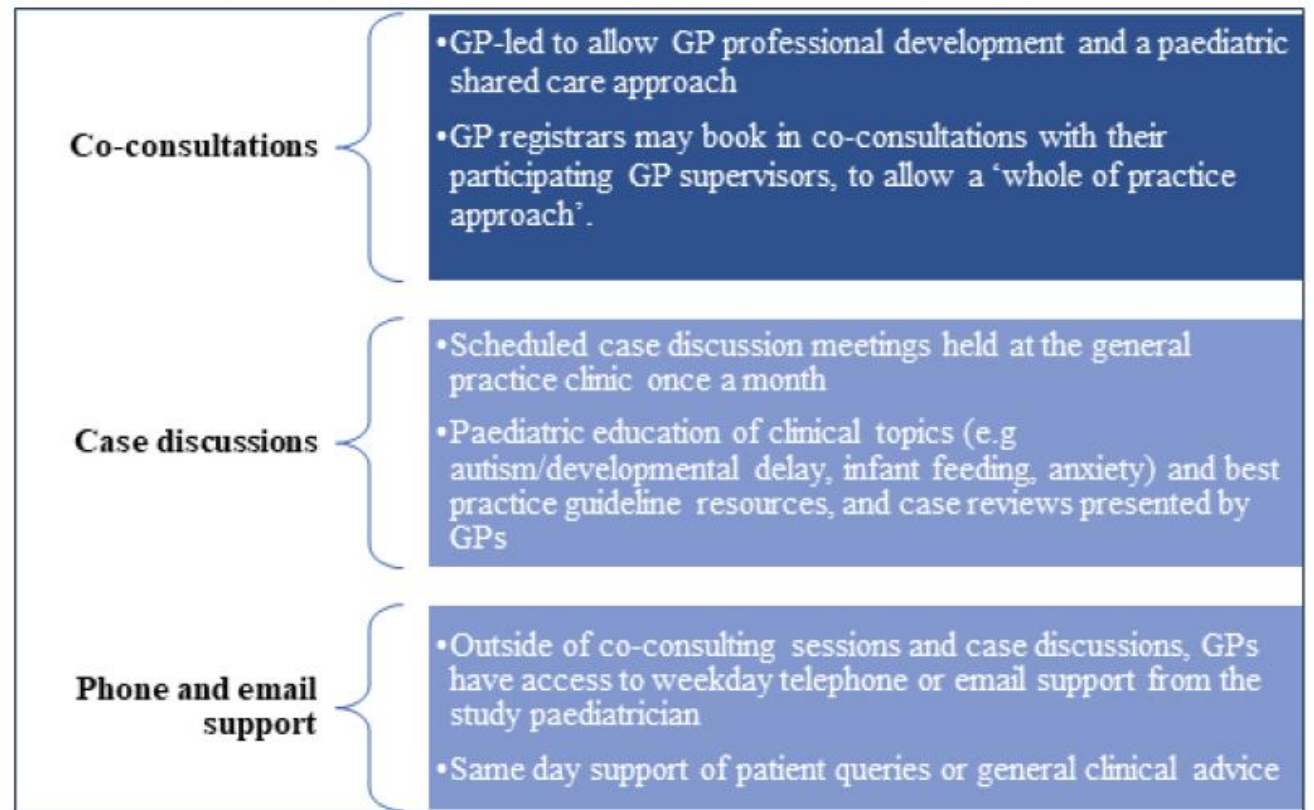


Figure 2 SC4C model of care intervention components. GPs, general practitioners; SC4C, Strengthening Care for Children

Connecting Care for Children

- Connecting Care for Children was established in 2014 by paediatricians at Imperial College Healthcare NHS Trust
- Developed **child health general practice hubs, which consist of a primary care network and a paediatric consultant** who work together to meet the needs of the local population using one practice as the centre of care.
- Patients **identified and referred** by a consultant or general practitioner to be seen in the hub clinic or discussed as a clinical case in the **multidisciplinary team meeting**, where they are joined by a number of professionals, such as health visitors, trainee doctors, mental health workers, school nurses, social workers and other allied health professionals
- The **Whole Systems Integrated Care dashboards** used to generate a number of **long-term condition-specific 'watch lists' or 'radars'**. These allow clinicians to sort patients with long-term conditions by several parameters such as the number of disease-specific care processes, pre-identified risk factors outstanding or by number of attendances at Accident and Emergency in last year. This in turn helps clinicians to identify patients with multiple risk factors and ensure the patient is reviewed and care is optimised.
- Using the dashboard radar, hub practices may also **run disease-specific hub clinics** in collaboration with a paediatric consultant and specialist nurses. International locations include Vejle, Denmark and Melbourne,

Box 1. Potential impact of the Connecting Care for Children hubs on quality of care.

- 39% reduction in new patient hospital appointments
- A further 42% of appointments were shifted from hospital to general practice
- 19% decrease in sub-specialty new patient appointments
- 17% reduction in paediatric admissions
- 22% decrease in emergency attendances

Reduced child mortality

Integrated management of childhood illness (IMCI) strategy for children under five (Review)

Gera T, Shah D, Garner P, Richardson M, Sachdev HS



strategy may reduce child mortality, and packages that include interventions for the neonatal period may reduce infant mortality. IMCI may have little or no effect on nutritional status and probably has little or no effect on vaccine coverage. Maternal care seeking behavior may be more appropriate with IMCI, but study results have been mixed, providing evidence of very low certainty about whether IMCI has effects on adherence to exclusive breast feeding.

Reduced neonatal mortality

RESEARCH ARTICLE

Impact of integrated community-facility interventions model on neonatal mortality in rural Bangladesh- a quasi-experimental study

Tanvir M. Huda^{1*}, Suman Kanti Chowdhury², Jatan Bhowmick³, Sabrina Sharmin Priyanka², Mohammad Sohel Shomik², Qazi Sadeq-ur Rahman², Mizanur Rahman⁴, Ishtiaq Mannan⁵, Shams El Arifeen²

Interpretation

Our integrated community-facility interventions model resulted in early identification of severely sick neonates, early care seeking and improved treatment. The interventions led to a significant reduction in all-cause neonatal mortality and case fatality from severe illness.

Improves maternal well-being and behaviour

RESEARCH ARTICLE

Open Access

Community health workers impact on maternal and child health outcomes in rural South Africa – a non-randomized two-group comparison study

Karl W. le Roux^{1,2,3,4}, Ellen Almirol⁵, Panteha Hayati Rezvan⁵, Ingrid M. le Roux⁶, Nokwanele Mbewu⁶, Elaine Dippenaar¹, Linnea Stansert-Katzen^{1,2}, Venetia Baker², Mark Tomlinson^{1,7†} and M. J. Rotheram-Borus^{5*†}

Results: Home visiting had limited, but important effects on child health, maternal wellbeing and health behaviors. Mothers reported fewer depressive symptoms, attended more antenatal visits and had better baby-feeding practices. Intervention mothers were significantly more likely to exclusively breastfeed for 6 months (OR: 1.8; 95% CI: 1.1, 2.9), had lower odds of mixing formula with baby porridge (regarded as detrimental) (OR: 0.4; 95% CI: 0.2, 0.8) and were less likely to consult traditional healers. Mothers living with HIV were more adherent with co-trimoxazole prophylaxis ($p < 0.01$). Intervention-group children were significantly less likely to be wasted (OR: 0.5; 95% CI 0.3–0.9) and had significantly fewer symptoms of common childhood illnesses in the preceding two weeks (OR: 0.8; 95% CI: 0.7,0.9).

Increase in caregiver care-seeking behaviour



Trusted evidence.
Informed decisions.
Better health.

Cochrane Database of Systematic Reviews

[Intervention Review]

Integrated community case management of childhood illness in low- and middle-income countries

Nicholas P Oliphant^{1,2}, Samuel Manda^{3,4}, Karen Daniels^{5,6}, Willem A Odendaal⁵, Donela Besada⁵, Mary Kinney², Emily White Johansson⁷, Tanya Doherty^{2,5}

Key messages

When iCCM is compared to usual facility services, it probably increases the number of parents who seek care from a healthcare worker. But we do not know if more children get the correct treatment, and it may have no effect on the number of children who die.

Authors' conclusions

iCCM probably increases coverage of careseeking to an appropriate provider for any iCCM illness. However, the evidence presented here underscores the importance of moving beyond training and deployment to valuing iCCM providers, strengthening health systems and engaging community systems.

Barriers to integrated care

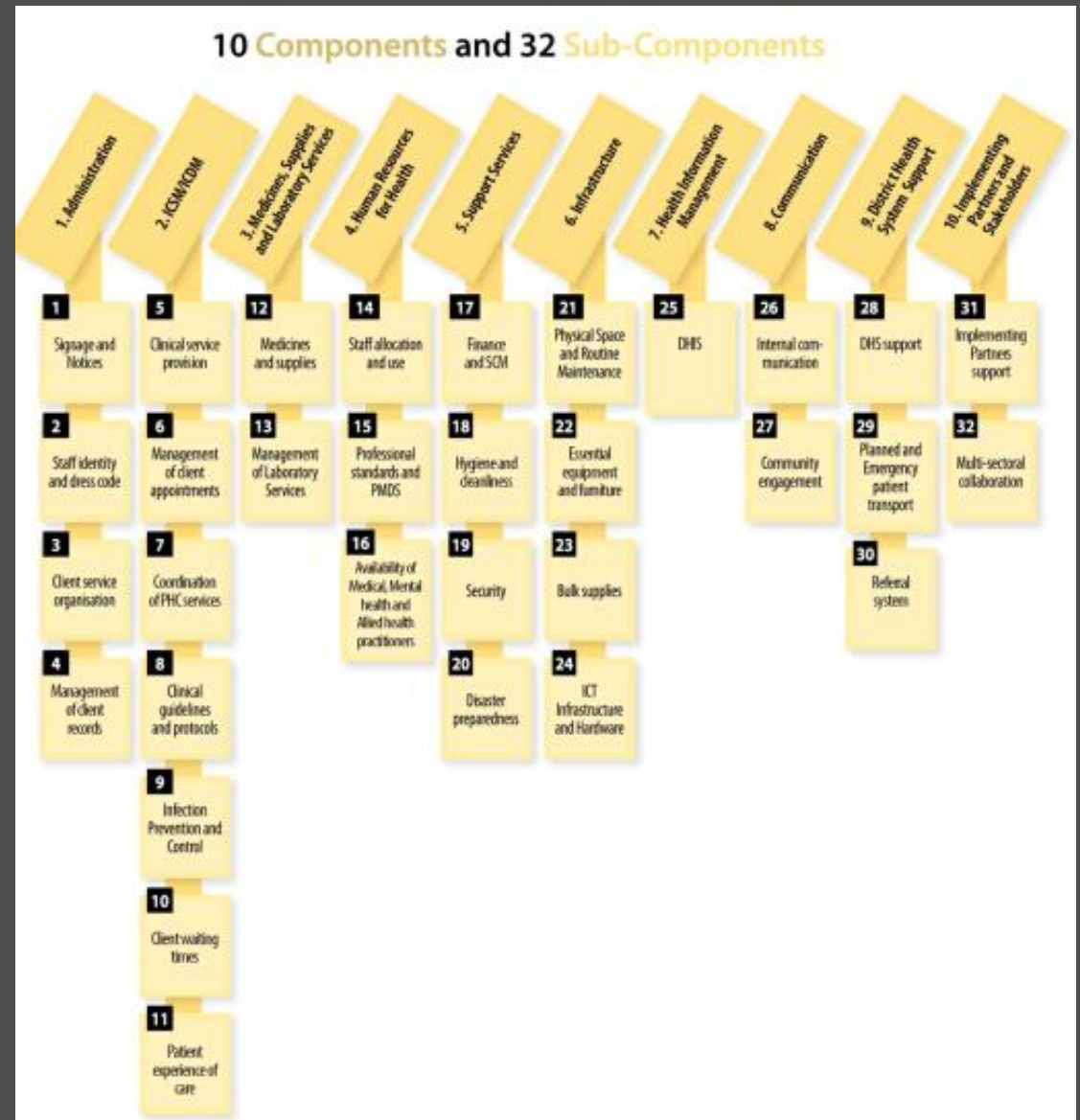


Barriers to integrated care delivery

Low-resource settings	Lack of access to healthcare facilities	Insufficient infrastructure and resources	Limited availability of trained healthcare professionals
High-resource settings	Fragmented healthcare system	Specialisation over integration	High healthcare costs and Inequality
Common barriers in both settings	Communication challenges	Limited parent/caregiver engagement	Inadequate health information systems

The South African context





ICSM model components



HEALTH SERVICE RE-ORGANISATION

- Single administrative point
- Pre-appointment retrieval of clinical records
- Appointment scheduling
- Re-organisation of patient flow based on streams of care
 - Integration of care
 - Designated waiting areas
 - Designated vital signs station
 - Designated consultation rooms
- Pre-dispensing of medication/CCMDD



CLINICAL MANAGEMENT SUPPORT

- Clinical guidelines and tools
- Clinical stationery & patients' records
- Clinical training
- Supervision and support by district clinical specialist teams (DCST)



'ASSISTED' SELF-MANAGEMENT

- Health promotion and education at community level
- Identification of at-risk patients within the household
- Point of care testing and screening
- Support groups and adherence clubs
- Medication delivery (courier service)



POPULATION HEALTH AWARENESS & SCREENING

- Health awareness campaigns
- Universal test and treat
- Social marketing.
- Screening services
- Integrated School Health Teams



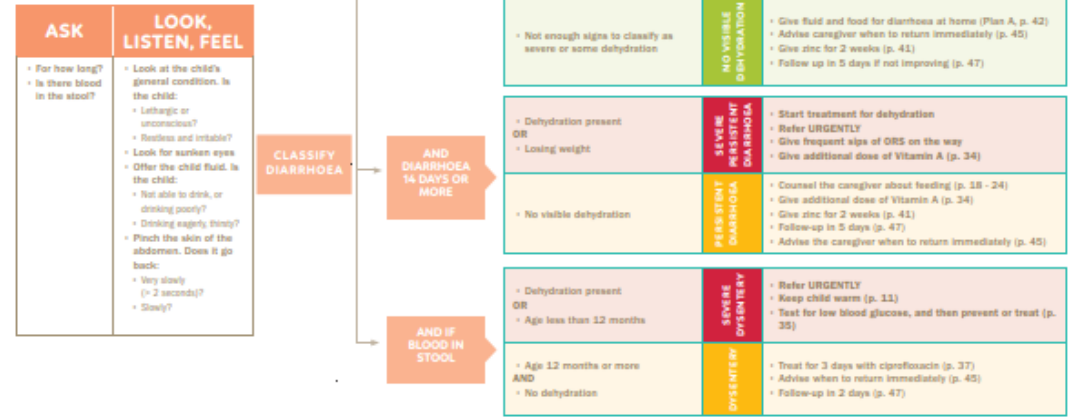
HEALTH SYSTEM STRENGTHENING

- Human resources – capacity building and scheduling
- Medicine supply – stock management
- Equipment – essential equipment List
- Health information
- Advocacy and leadership

Integrated Management of Childhood Illness 2022



DOES THE CHILD HAVE DIARRHOEA?



Assess and interpret growth

www.nhs.uk/childgrowthcharts/choosing-your-childs-growth-chart-at-age-5

1 Weight-for-age

Measure weight for age at birth until 2 years of age

Measure weight for age from 2 years of age until 5 years of age

2 Length-for-age

Measure length for age from birth until 5 years of age

3 Weight-for-length/height

Measure weight for length/height until 2 years of age

Measure weight for length/height from 2 years of age until 5 years of age

4 Mid upper arm circumference (MUAC)

Measure MUAC from birth until 5 years of age

5 Head circumference

Measure head circumference at 14 weeks of age and 2 months of age

Pack Child

Practical Approach to Care Kit for Children (PACK Child)


RESEARCH ARTICLE

Addressing the quality and scope of paediatric primary care in South Africa: evaluating contextual impacts of the introduction of the Practical Approach to Care Kit for children (PACK Child)

Jamie Murdoch^{1*}, Robyn Curran², Ruth Cornick^{2,3}, Sandy Picken², Max Bachmann⁴, Eric Bateman², Makhosazana Lungile Simelane² and Lara Fairall^{5,2,3}

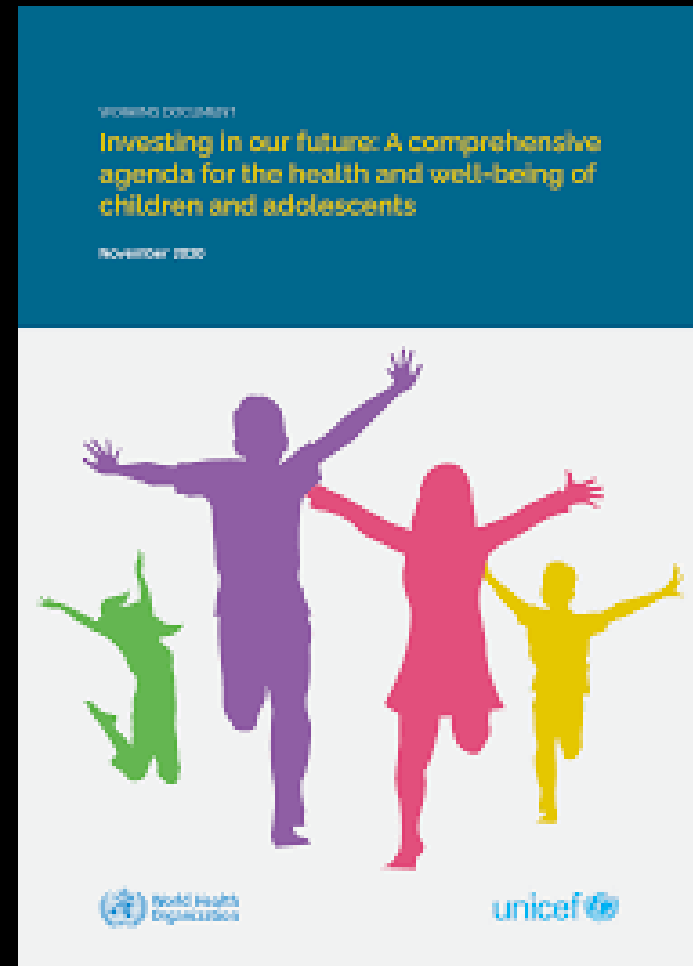
Conclusion: Our findings provide evidence that PACK Child is catalysing a transition to an approach that strikes a balance between assessing and minimising risk on the day of acute presentation and a larger remit of care for children over time. However, optimising success of the intervention requires reviewing priorities for paediatric care which will facilitate enhanced skills, knowledge and deployment of clinical staff to better address acute illnesses and long-term health conditions of children of all ages, as well as complex psychosocial issues surrounding the child.

Addressing the quality of paediatric primary care: health worker and caregiver perspectives from a process evaluation of PACK child, a health systems intervention in South Africa

Robyn Curran^{1*} , Jamie Murdoch², Max Bachmann³, Eric Bateman¹, Ruth Cornick¹, Sandra Picken¹, Makhosazana Lungile Simelane¹ and Lara Fairall^{1,4}

Conclusion: PACK Child appears to be catalysing paediatric primary care to address the broader needs of children, including long-term health conditions and the identification of psychosocial problems. However, to maximise this requires primary care to re-orientate from risk minimisation on the day of attendance towards a view of the child beyond the day of presentation at clinics.

The future



Areas for improvement

Care Coordination: between levels of care and different healthcare providers, such as nurses, primary care doctors, specialists, and community health workers

Health Information Systems: electronic health records (EHRs) to aid in tracking children's health histories, treatments, and appointments

Nutrition and Early Childhood Development

Childhood Mental Health Services: Expanding access to child mental health services and integrating them into primary care settings

Monitoring and Evaluation: Regularly assessing the quality of integrated child health care services

Public-Private Partnerships: Collaborations between public and private healthcare sectors can leverage resources and expertise

Healthcare Workforce Development: Investing in training and continuing education for healthcare professionals

Viewpoint

Integrated care: putting principles into practice and becoming the paediatrician of the future

Kate Dharmarajah , Chloe Macaulay 

Dharmarajah K, Macaulay C. *Arch Dis Child* March 2023 Vol 108 No 3

THE CHALLENGES: HOW TO MEET THESE TRAINING NEEDS IN THE HERE AND NOW

There is no formal integrated care 'curriculum'

Integrated services are not (yet) widespread

Trainers do not feel confident 'teaching' integrated care

Paediatric placements are predominantly within acute care settings

Trainee paediatricians move placements frequently

Conclusion

Integration means different things to different people

Implementing integration is highly context dependent

There are multiple ways in which integration of child primary care has been attempted - some complex, some simple – and in a variety of settings

Evidence of success is mixed but exists. However, because of the unique nature and context of interventions, generalisation is difficult

Attempts at child health integration have been attempted in the South African setting. There is a paucity of outcome data.

Further efforts at integration should continue, with deliberate attention to evaluating outcomes