

# Implementation research: for real-world change in primary care



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Professor of Primary Care Respiratory Medicine,  
The University of Edinburgh

Family physician

Chair: Education Council, European Respiratory Society



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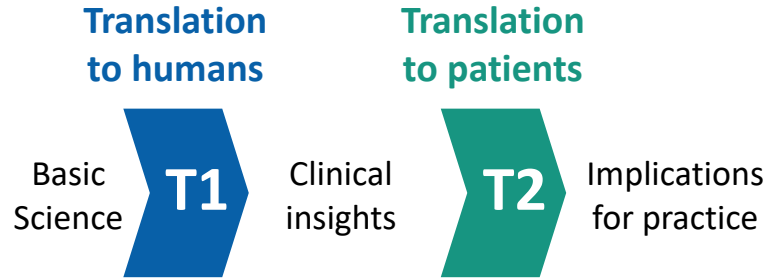
I have no conflicts of interest relevant to this presentation

# Implementation research: for real-world change in primary care

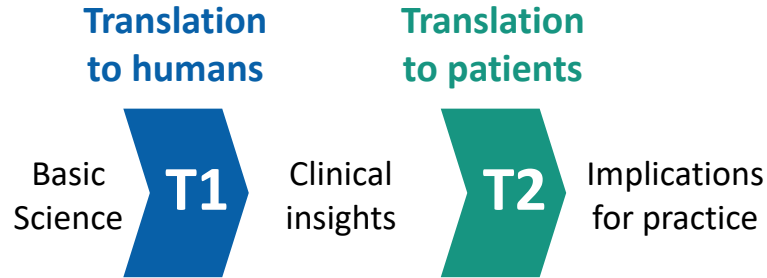


- Positioning implementation research
- Exemplars of implementation
- The challenge of implementation

# Translational gaps



# Translational gaps



Human physiology  
First in humans (healthy volunteers)  
Proof of concept  
Phase 1 clinical trials

**Human physiology  
and the potential for  
intervention**

**Findings from basic research are tested for clinical effect  
and/or applicability**

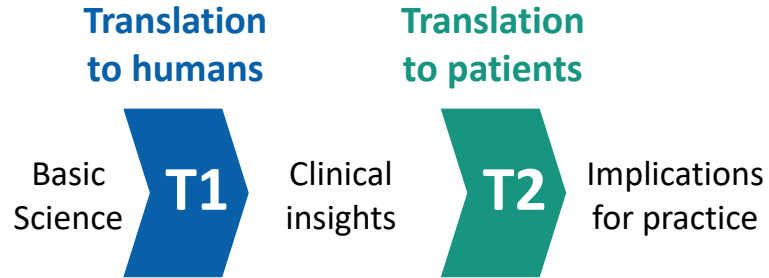
<https://catalyst.harvard.edu/pathfinder/>



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# Translational gaps



Phase 2 clinical trials  
Phase 3 clinical trials

**Efficacy in  
optimal settings**

**New interventions are tested under controlled environments to form the basis for clinical application and evidence-based guidelines**

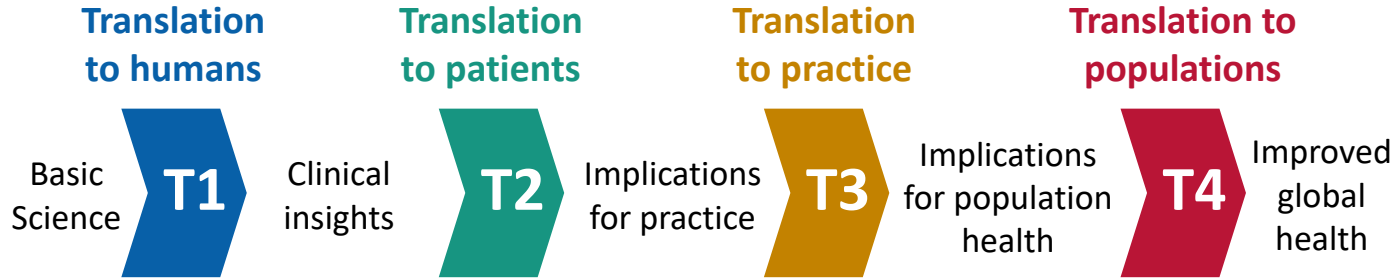
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# Translational gaps



Phase 4 Clinical Trials  
Health Services Research  
-Dissemination, Communication  
-Implementation  
Clinical Outcomes Research.

**Effectiveness in real-world settings**

**Explore ways of applying recommendations or guidelines in clinical practice.**

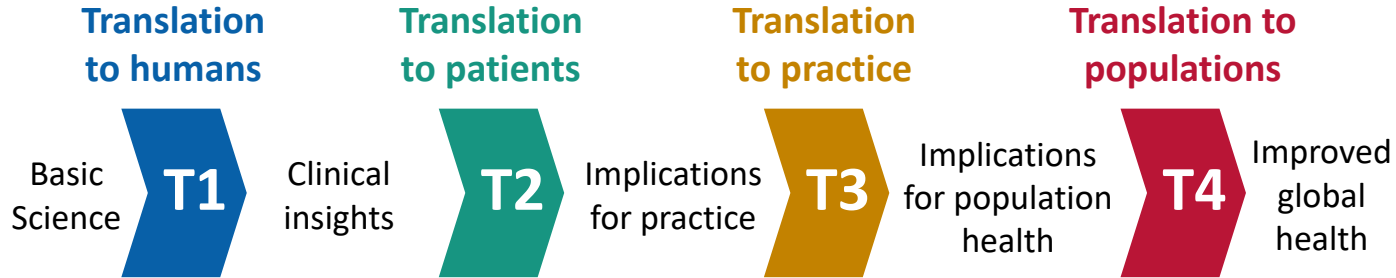
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# Translational gaps



Public health implementation  
Population-level outcome studies  
Social Determinants of Health.

**Improved global health**

**Study factors and interventions that influence the health of populations.**

<https://catalyst.harvard.edu/pathfinder/>

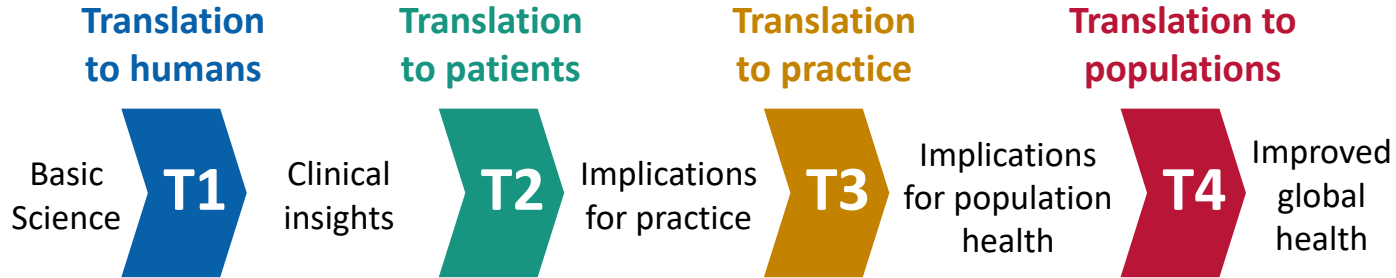


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# Translational gaps



It is not enough to show that an intervention can work under ideal conditions (as in a trial)

The implementation question is 'will it work – or can I adapt it to make it work - in my setting'

# Methodology that bridges the gaps



Translation  
to humans

Translation  
to patients

Translation  
to practice

Translation to  
populations

Basic  
Science

T1

Clinical  
insights

T2

Implications  
for practice

T3

Implications  
for population  
health

T4

Improved  
global  
health

How does  
work?



Can it work under  
ideal conditions?



Does it work under  
usual conditions?



How to implement it  
in a population?



Physiological  
outcomes



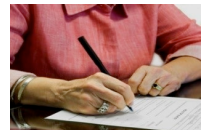
Increasing flexibility



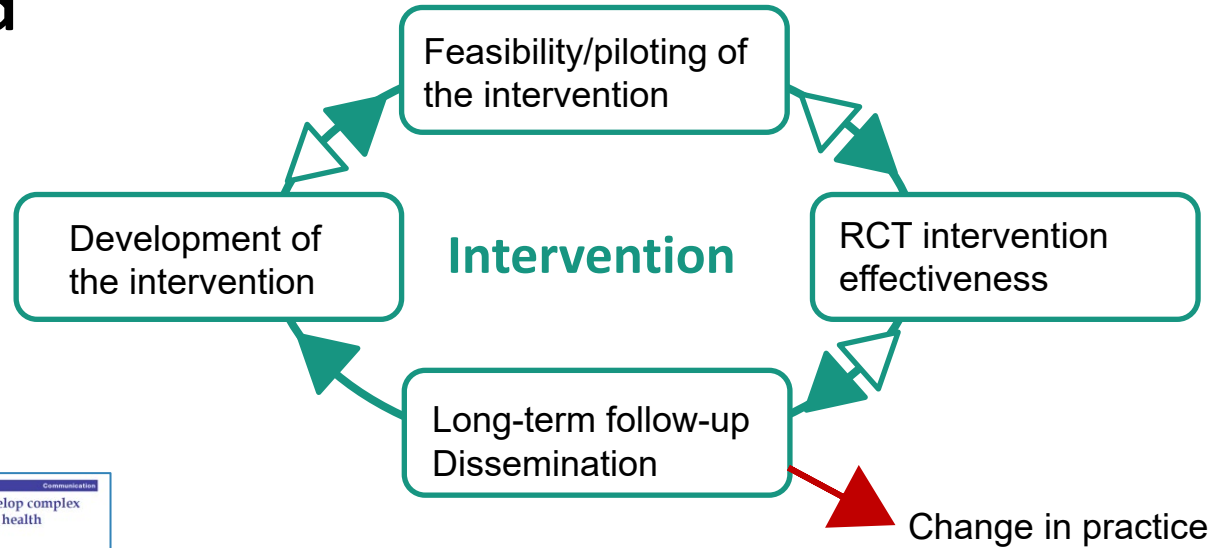
Health service outcomes and  
patient reported outcomes



Population  
statistics



# Interventions and implementation strategies



**Developing and evaluating complex interventions: new guidance**

MRC Medical Research Council

**BMJ Open** Guidance on how to develop complex interventions to improve health and healthcare

Alice O'Carroll,<sup>1</sup> Lu Crox,<sup>2</sup> Edward Duncan,<sup>3</sup> Nikki Rousseau,<sup>4</sup> Katie Swain,<sup>5</sup> Rebecca M Turner,<sup>6</sup> Lucy Yardley,<sup>7</sup> Pat Hoddinott<sup>8</sup>

**BMJ Open** 2019;9:e029954

**BMJ** 2021;374:n2061

**BMJ** 2021;374:n1679

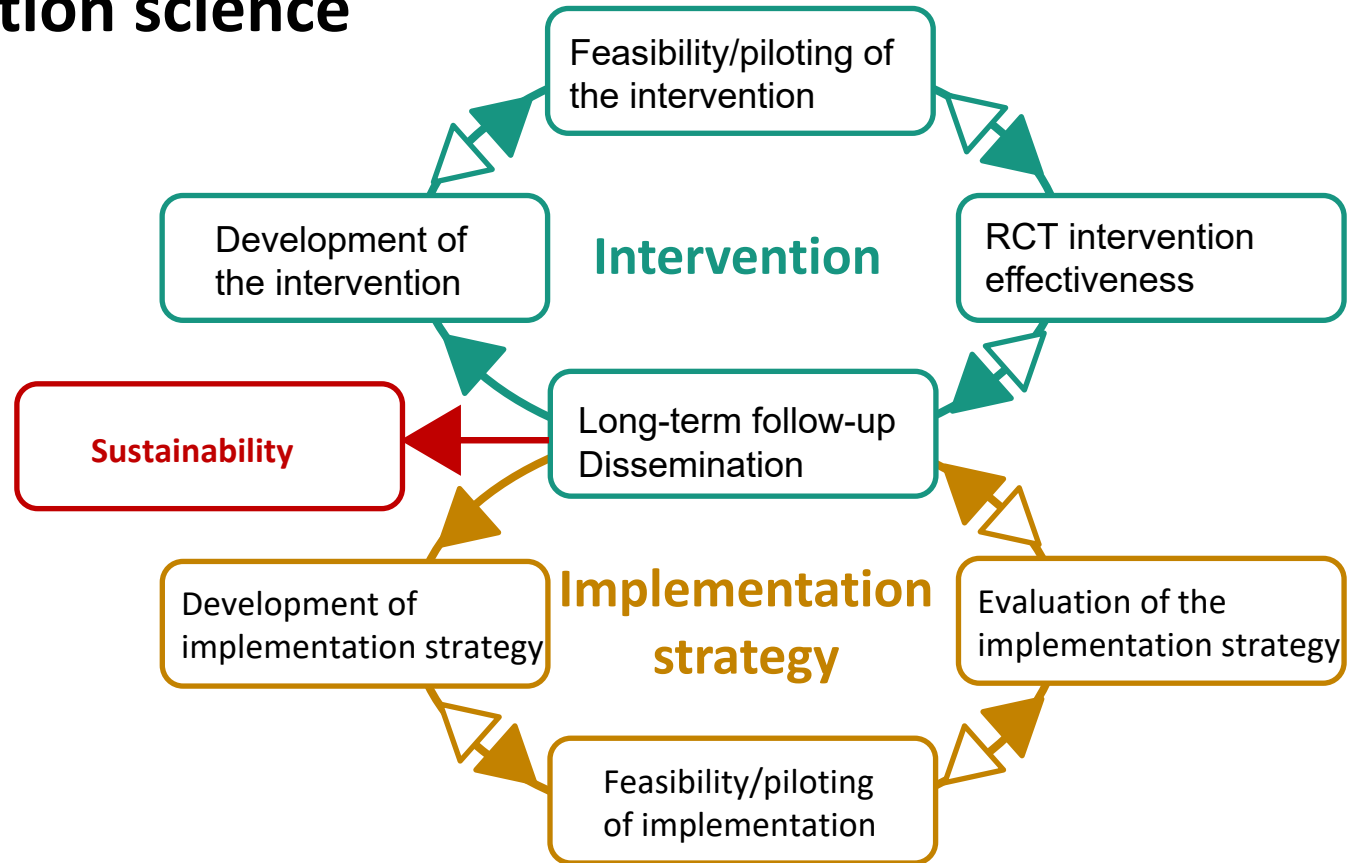
**Adapting interventions to new contexts—the ADAPT guidance**

Graham Moore,<sup>1</sup> Mhairi Campbell,<sup>2</sup> Lauren Copeland,<sup>3</sup> Peter Craig,<sup>2</sup> Ani Movsisyan,<sup>3,4</sup> Pat Hoddinott,<sup>5</sup> Hannah Littlecott,<sup>6</sup> Alice O'Carroll,<sup>7</sup> Eva Pfisterhaug,<sup>8</sup> Eva Refsum,<sup>9,10</sup> Jeremy Saper,<sup>11</sup> Penelope Hawe,<sup>12</sup> Frank Kee,<sup>13</sup> Daniele Costantini,<sup>14</sup> Britt Kallings,<sup>15</sup> Rhianon Evans<sup>16</sup>

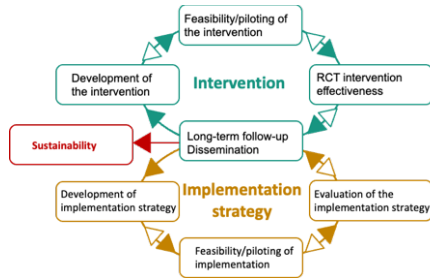
**BMJ** 2021;374:n1679

Medical Research Council.  
Developing and evaluating complex interventions

# Implementation science



# Definitions



## Intervention

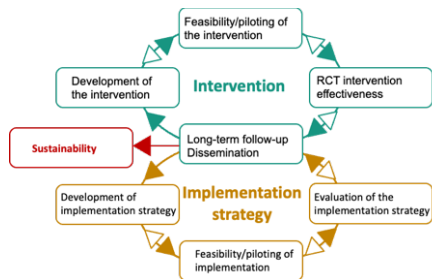
The evidence-based intervention being implemented

## Implementation strategy

The evidence-based strategies used to promote implementation

Report the following:		"Implementation strategy" refers to how the intervention was implemented. "Intervention" refers to the healthcare or public health intervention that is being implemented.	
Checklist item		Implementation Strategy	Intervention
<b>Title</b>	1	Identification as an implementation study, and description of the methodology in the title and/or keywords)	
<b>Abstract</b>	2	Identification as an intervention implementation study, including a clear description of the implementation strategy, the clinical, healthcare, or public health intervention and the key outcomes.	
<b>Introduction</b>	3	Description of the deficiency in healthcare or public health that the intervention being implemented aims to address.	
	4	The scientific background and rationale for the implementation strategy (including any underpinning theory/framework/model, how it is expected to achieve its effects and any pilot work).	The scientific background and rationale for the intervention being implemented (including evidence about its effectiveness and how it is expected to achieve its effects).
<b>Aims</b>	5	The aims of the study, differentiating between implementation strategy objectives and any intervention objectives.	

# Definitions



## Intervention

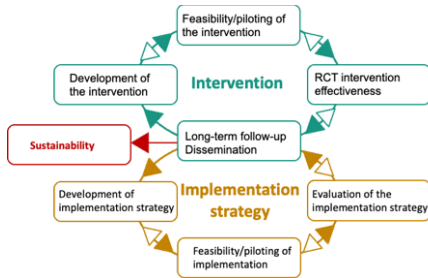
The evidence-based intervention being implemented

## Implementation strategy

The evidence-based strategies used to promote implementation

Checklist item		Implementation Strategy	Intervention
<b>Methods: description</b>	6	The design and key features of the evaluation, (cross referencing to any appropriate methodology reporting standards) and any changes to study design/outcomes, with reasons	
	7	The context in which the intervention was implemented. (Consider social, economic, policy, healthcare, organisational barriers and facilitators...).	
	8	The characteristics of the targeted 'site(s)' (locations/personnel/resources etc.) for implementation and any eligibility criteria.	The population targeted by the intervention and any eligibility criteria.
	9	A description of the implementation strategy	A description of the intervention
	10	Any sub-groups recruited for additional research tasks, and/or nested studies are described	
<b>Methods: evaluation</b>	11	Defined pre-specified primary and other outcome(s) of the implementation strategy, and how they were assessed. Document any pre-determined targets	Defined pre-specified primary and other outcome(s) of the intervention (if assessed), and how they were assessed. Document any pre-determined targets
	12	Process evaluation aims and outcomes (related back to the 'logic pathway').	
	13	Resource use and costs data for the implementation strategy and / or the intervention (if assessed).	
	14	Rationale for sample sizes (including sample size calculations, budgetary constraints, practical considerations,	

# Definitions



## Intervention

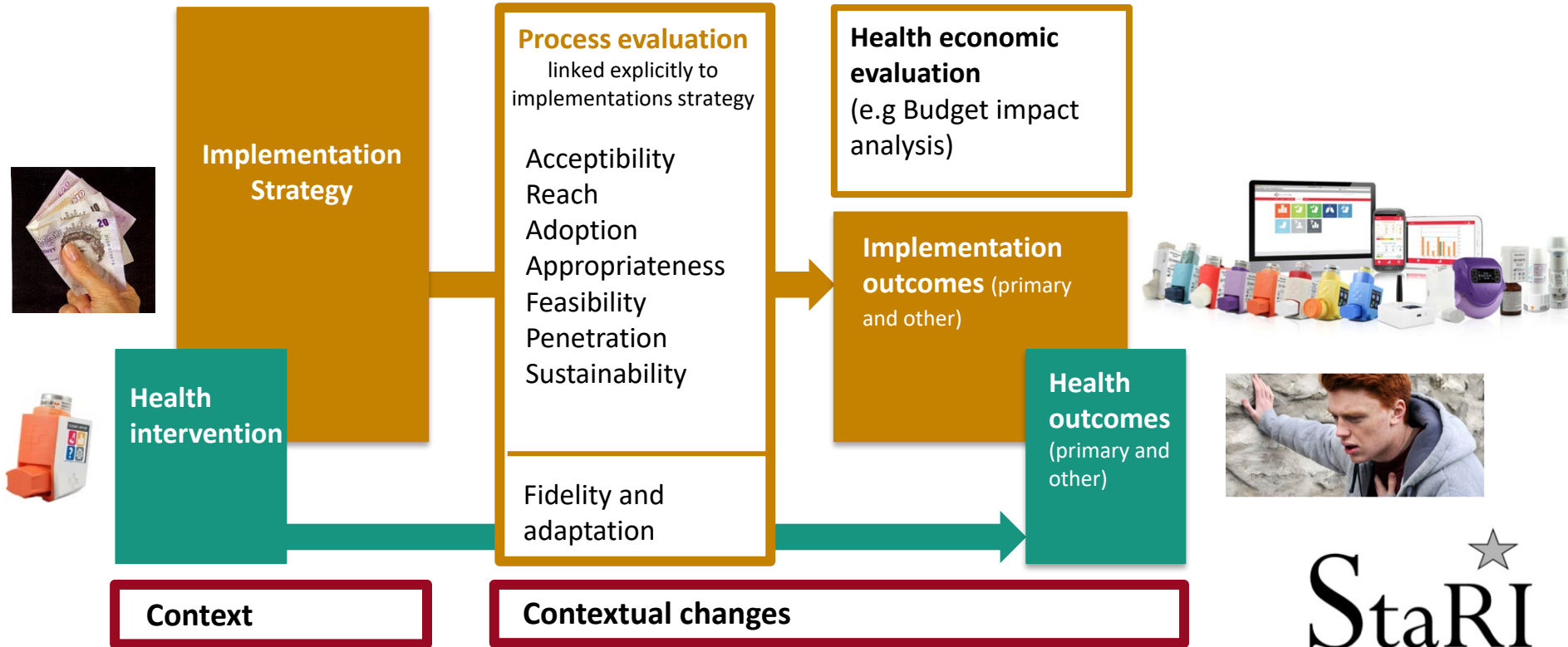
The evidence-based intervention being implemented

## Implementation strategy

The evidence-based strategies used to promote implementation

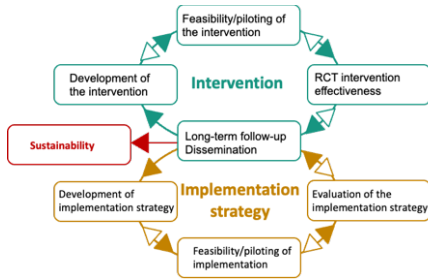
Checklist item		Implementation Strategy	Intervention
		↓	↓
Results	17	Characteristics of the recipient population for the implementation strategy.	Characteristics (if appropriate) of the recipient population for the intervention
	18	Primary and other outcome(s) of the implementation strategy.	Primary and other outcome(s) of the Intervention (if assessed).
	19	Process outcomes (that relate back to the 'logic pathway').	
	20	Resource use and cost analyses (includes a budget impact analysis, where relevant).	
Discussion	21	Reports representativeness and outcomes of subgroups including those recruited to specific research tasks	
	22	Fidelity to implementation strategy and adaptation to that process (where applicable).	Fidelity to delivering the core components of intervention and adaptations (where applicable).
	23	Contextual changes which may have affected results	
	24	All important harms or unintended effects in each group.	
General	25	Summary of findings, strengths and limitations, comparisons with other studies, conclusions and implications.	
	26	Discussion of policy, practice and research implications of the implementation strategy	Discussion of policy, practice and research implications of the intervention (where applicable).
General	27	Include statement(s) on regulatory approvals (including, as appropriate, ethical approval, confidential use of	

# Outcomes





# Definitions

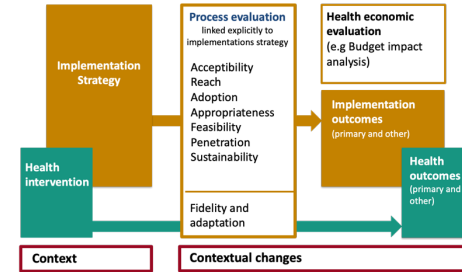


## Intervention

The evidence-based intervention being implemented

## Implementation strategy

The evidence-based strategies used to promote implementation



This distinction is not only helpful for academics...

Healthcare professionals, managers and policymakers will find it helpful to distinguish between:

- the planned service improvement (eg, treatment, management, core components, resources)
- and the evidence based implementation strategies used to embed the intervention into health systems (eg, adaptation to local context and routines, engaging stakeholders, training, incentives).

# Implementation research: for real-world change in primary care



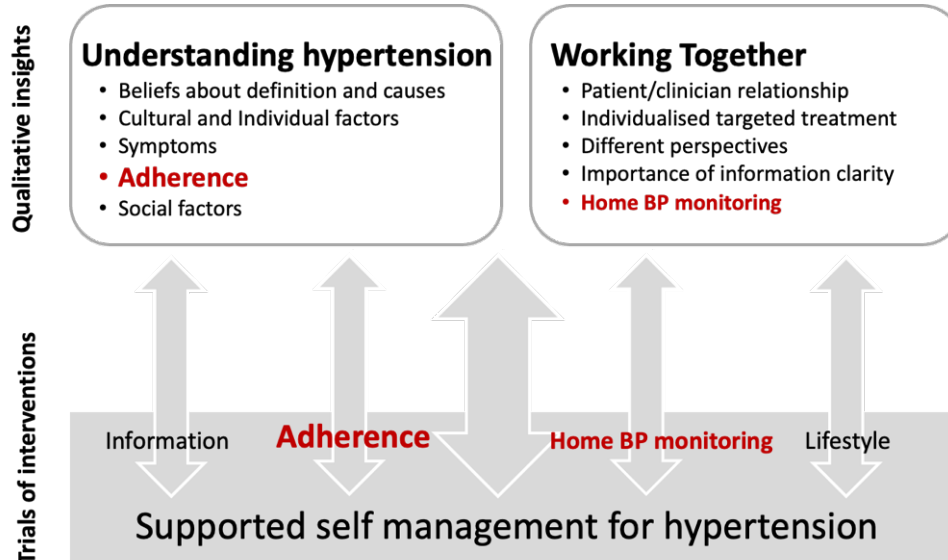
- Positioning implementation research
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# Home-monitoring for hypertension



As an asymptomatic condition, hypertension has traditionally been managed by clinicians measuring blood pressure at intervals. This has limited patients to passively complying with the clinicians' instructions.

# Home-monitoring for hypertension



Meta-review: 98 qualitative studies (in 6 reviews)  
446 quantitative studies (in 29 reviews)



For some patients, symptoms acted as a guide for the seriousness of their hypertension and guided their medication use:

- stopped treatment if symptoms disappeared.
- used medication to manage worry or anxiety

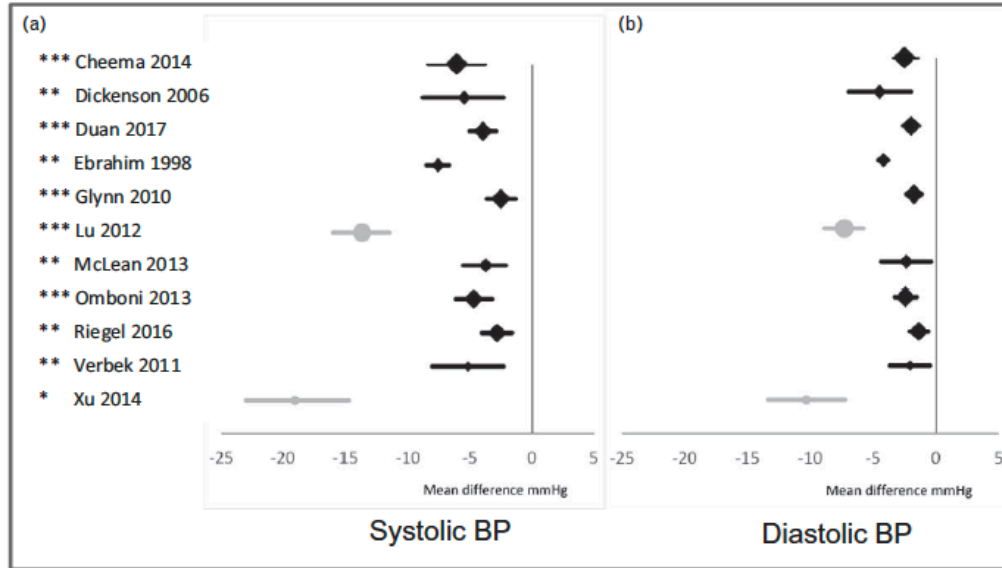
## Review

Supporting self-management for people with hypertension: a meta-review of quantitative and qualitative systematic reviews

Orjola Shahaj<sup>a</sup>, Diarmuid Denny<sup>b,c</sup>, Anna Schwappach<sup>d</sup>, Gemma Pearce<sup>e</sup>, Eleni Epiphaniou<sup>f</sup>, Hannah L. Parke<sup>g</sup>, Stephanie J.C. Taylor<sup>h</sup>, and Hilary Pincock<sup>g</sup>

# Home-monitoring for hypertension

Self-monitoring with feedback from healthcare professionals vs usual care



Meta-review: 98 qualitative studies (in 6 reviews)  
446 quantitative studies (in 29 reviews)



Foster a therapeutic alliance

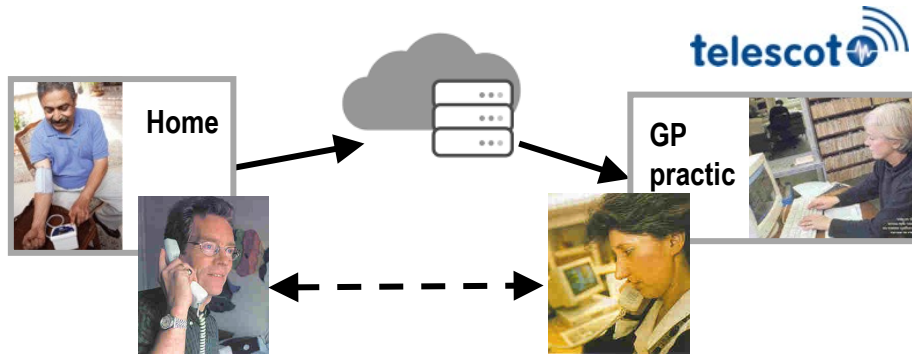
- changing the patient's perceptions of the significance of symptoms
- fostering a sense of self-control, motivation, and increased confidence in managing hypertension.

Review

Supporting self-management for people with hypertension: a meta-review of quantitative and qualitative systematic reviews

Orjola Shahaj<sup>a</sup>, Diarmuid Denny<sup>b,c</sup>, Anna Schwappach<sup>d</sup>, Gemma Pearce<sup>e</sup>, Eleni Epiphaniou<sup>f</sup>, Hannah L. Parke<sup>g</sup>, Stephanie J.C. Taylor<sup>h</sup>, and Hilary Pincock<sup>g</sup>

# Tele-monitoring for hypertension



## Reduced BP compared with control

≈ 4mm drop in systolic BP

≈ 2mm drop in diastolic BP

McKinstry et al. *BMJ* 2013;346:f3030

**Cost-effective** because of impact on cardiovascular disease

Stoddart et al. *BMJ Open* 2013;3:e002681

**Trusted, convenient for patients**

**Received positively by healthcare professionals**

Hanley et al. *BMJ Open* 2013;3:e002671

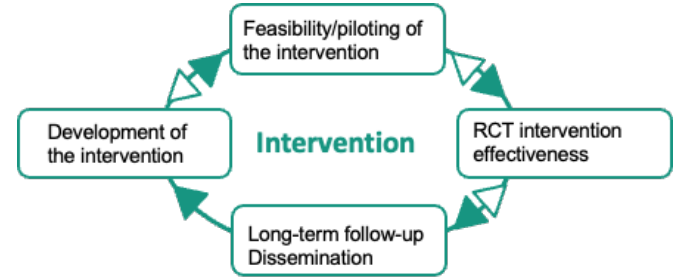
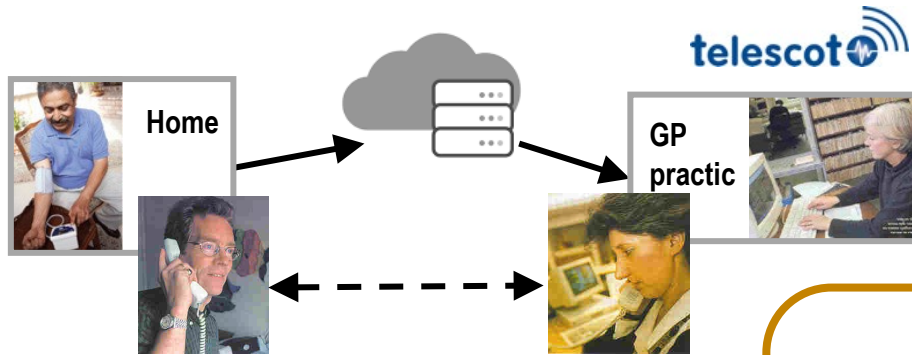
T2

RCT in Edinburgh, Lothian:

- 401 people with uncontrolled BP
- Outcome ambulatory BP



# Tele-monitoring for hypertension



## Implementation?

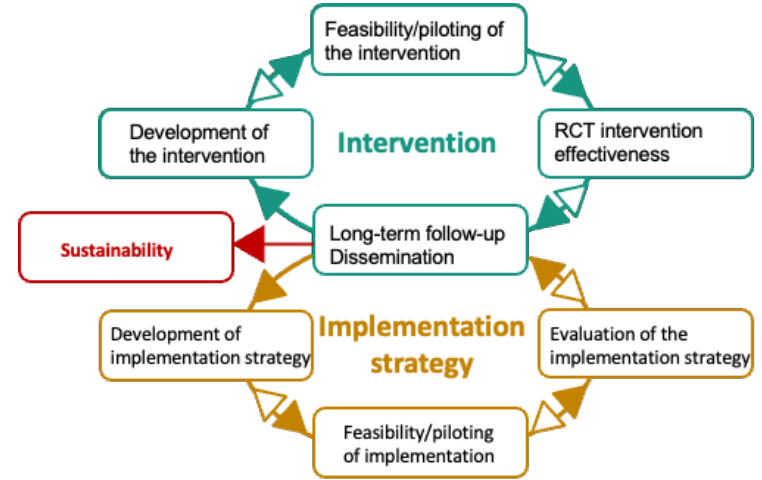
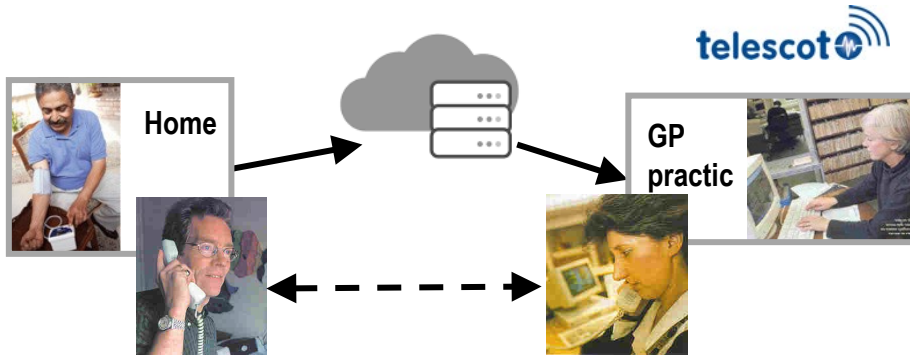
User friendliness  
 Preference  
 Equity  
 Convenience  
 Uptake and attrition  
 Feedback

Skills  
 Preferences  
 Set up time  
 Reimbursement  
 Incentives

Routines  
 Cost  
 Reimbursement  
 IT capability  
 Infrastructure  
 Patient profile  
 Information governance  
 Time

Policies and priorities  
 Data protection  
 Incentives  
 Cost (who pays...?)  
 Inequities

# Tele-monitoring for hypertension





# Implementing tele-monitoring for hypertension

Lack of confidence in IT skills (patients or professionals)

The trial system needed separate log-in

## Implementation strategy

Training and helplines

Feedback to practice via 'Docman'



Implementation challenges ...

Mark Florence      DOB:01/10/1990      CHI:1903444659  
 1 High Street, Bonnyrigg EH19 3PU  
 Mobile: 07898767652

BP Statistics	
Target	134/84
Avg Systolic	165
Avg Diastolic	84
Max Systolic	280
Min Systolic	80
Max Diastolic	100
Min Diastolic	56

**ALERT**  
 READINGS SUGGEST THAT BLOOD PRESSURE IS NOT CONTROLLED. CONSIDER ADHERENCE OR CHANGE IN THERAPY.

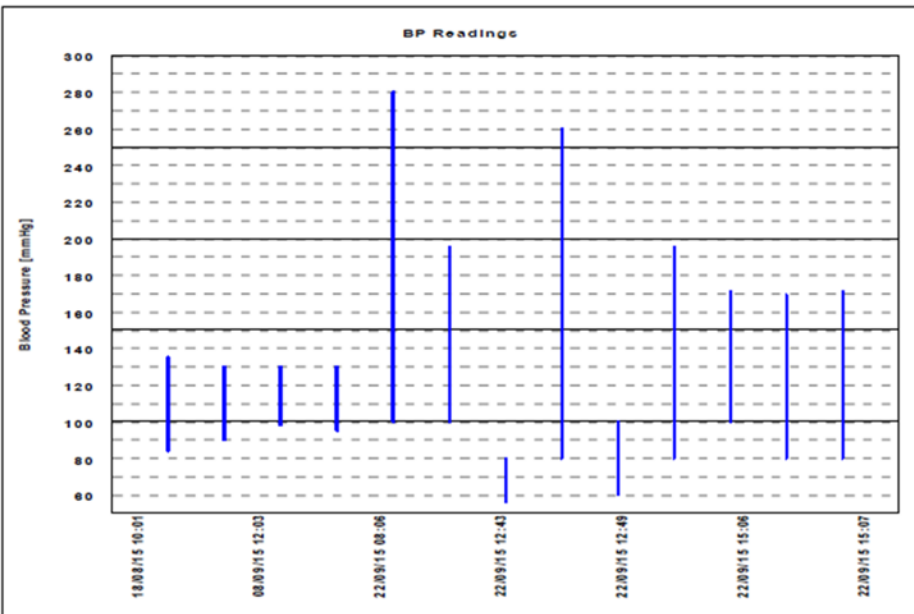
BP Readings				
Date	Time	Systolic	Diastolic	Alert
18/08/2015	10:01	135	84	BP Above Desired Range
25/08/2015	18:00	130	90	BP Above Desired Range
08/09/2015	12:03	130	98	BP Above Desired Range
15/09/2015	11:25	130	95	BP Above Desired Range
22/09/2015	08:06	280	100	
22/09/2015	08:07	195	100	BP Above Desired Range
22/09/2015	12:43	80	56	BP Below Desired Range
22/09/2015	12:44	280	80	Critical
22/09/2015	12:49	100	60	
22/09/2015	15:06	195	80	BP Above Desired Range
22/09/2015	15:06	171	100	BP Above Desired Range
22/09/2015	15:06	169	80	BP Above Desired Range
22/09/2015	15:07	171	80	BP Above Desired Range

## Target, Average BP, Alert

PDF sent via normal practice systems:

- No need to change routines
- No need to scroll down
- Interval set by the general practitioner

Feedback to practice via 'Docman'



Implementation challenges ...

# Implementing tele-monitoring for hypertension



## Implementation strategy

Training and helplines

Feedback to practice via 'Docman'

NHS Lothian funded support

NHS Lothian provided equipment

Promote asynchronous consulting

Flexible BP targets and review regimes

**Awareness, local champions; feedback of uptake, encouraging adaptation**

**Outcomes: routine data**

Lack of confidence in IT skills (patients or professionals)

The trial system needed separate log-in

Initial registration was time-consuming

Potential increase inequities

Could be difficult to contact patient

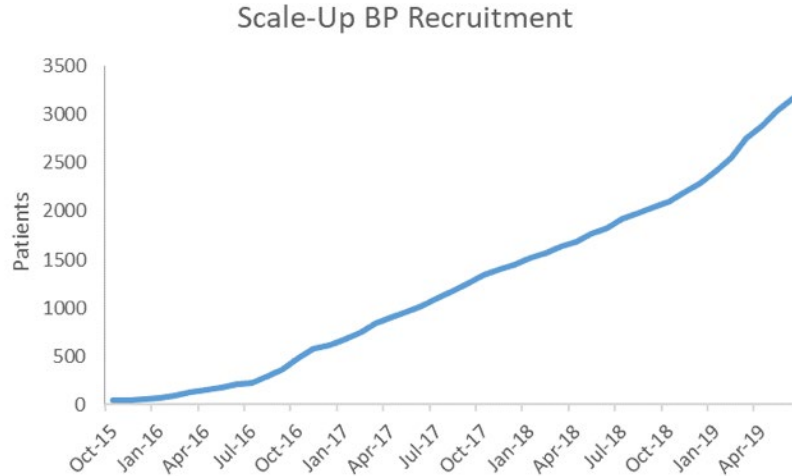
Patients vary in their clinical needs



# Implementing tele-monitoring for hypertension

## Implementation outcomes

75/126 practices in Lothian signed up over 45 months, each recruiting between 6 and 400 patients



3,200 patients and still increasing at end of the evaluation



*"I think there is a clear vision of not having patients coming in for routine hypertension, and that must be the way forward."* (GP)

*Why go down to the surgery when I can do it sitting at the kitchen table?* [Patient]

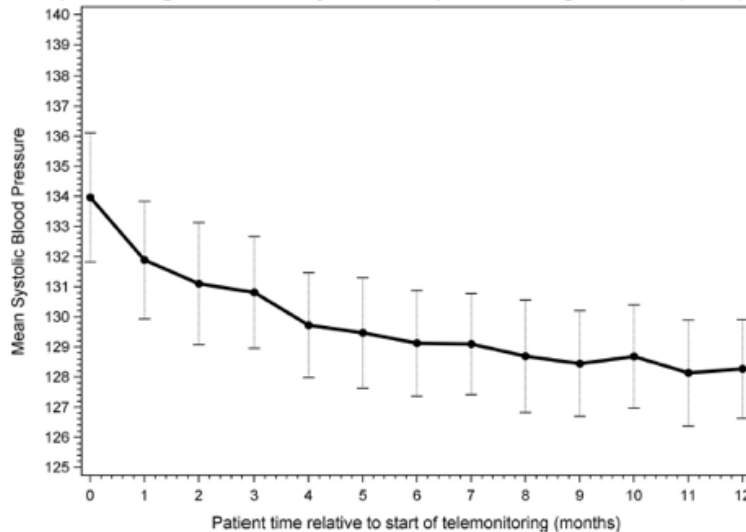
# Implementing tele-monitoring for hypertension



## Health outcomes

Detailed routine data from eight of the practices

Line plot showing telemonitored systolic blood pressure change over time (N=185)



## Aware of raised BP

*“Couldn’t bear looking at a 150/110 and I wanted to just be able to see better readings in a way”. [Patient]*

## Improved adherence

Increase in number of prescriptions/patient from 9.63 to 10.69 scripts/year

## Adherence by whom...???



Prescribing by the healthcare professional?



Patient adherence to medication?

# Implementation research: for real-world change in primary care



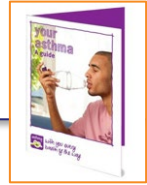
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# Supported self-management for asthma

## Variable condition

Action plan

Pinnock et al. BMC Medicine 2017;15:64



All people with asthma should be offered self-management education which should include a written personalised asthma action plan and be supported by regular professional review

# Supported self-management for asthma

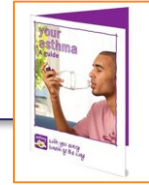
## Variable condition

### Action plan

Pinnock et al. BMC Medicine 2017;15:64



Name: _____ IC: _____ Personal Best PEF: _____ Litres Date of Plan: _____ Doctor: _____ Hospital/Clinic: _____ Phone No.: _____										
<p><b>Green: Doing Well</b> (Green smiley face)</p> <p>No cough, wheeze, chest tightness or shortness of breath                  No night or early AM awakenings                  No oral steroids                  PEF _____ Litres (80% to 100% of personal best)</p>	<p>Take your controller medications exactly:</p> <table border="1"> <tr> <th>Controller medication</th> <th>How Much</th> <th>How Often</th> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </table> <p>Use spacer when possible</p>	Controller medication	How Much	How Often	_____	_____	_____	_____	_____	_____
Controller medication	How Much	How Often								
_____	_____	_____								
_____	_____	_____								
<p><b>Yellow: Getting Worse</b> (Yellow smiley face)</p> <p>Cough, wheeze, chest tightness or shortness of breath ON                  2 or more of night or early AM awakenings ON                  Can't do work, school or usual activities ON                  CAUTION: _____                  PEF _____ Litres (50% to 70% of personal best)</p>	<p>Take your regular medications and step-up reliever medication for 1 hour                  (unless instructed otherwise) _____ puffs _____ times daily</p> <p>If you experience MORE than 3 severe attacks after 1 hour                  Step-up controller medication _____ puffs _____ times daily                  Continue only your reliever medication and go to the nearest hospital or clinic                  Use spacer when possible</p>									
<p><b>Red: Alert</b> (Red smiley face)</p> <p>Symptoms are worsening (cough, wheeze, chest tightness, shortness of breath, waking at night, awakenings ON)                  You need your reliever medication                  PEF _____ Litres (Less than 50% of personal best)</p>	<p>Continue using your reliever medication:                  (unless instructed otherwise) _____ puffs _____ times daily</p> <p>Use spacer when possible</p> <p>Use spacer when possible</p> <p>Use spacer when possible</p>									



## What to do if...

### Effective written action plans:

- ✓ Symptoms or peak flow (using personal best PF)
- ✓ 2 to 4 action points
- ✓ Increasing ICS and commencing oral steroids
- ✓ When to seek help



### My Asthma Plan

Your asthma plan tells you what medicines to take to stay well.

And what to do when your asthma gets worse

Name: \_\_\_\_\_

### My Asthma Plan

**1 My usual asthma medicines**

My preventer inhaler is called \_\_\_\_\_ and its colour is \_\_\_\_\_

I take \_\_\_\_\_ puffs of my preventer inhaler in the morning and \_\_\_\_\_ puffs at night. I do this every day even if I feel well.

Other asthma medicines I take every day \_\_\_\_\_

My reliever inhaler is called \_\_\_\_\_

I take \_\_\_\_\_ puffs of my reliever inhaler when I wheeze or cough, my chest hurts or it's hard to breathe.

My best peak flow is \_\_\_\_\_

If I need my blue inhaler to do any sports or activity, I need to see my doctor or asthma nurse.

**2 My asthma is getting worse if...**

- I wheeze or cough, my chest hurts or it's hard to breathe, or
- I need my reliever inhaler (usually blue) three or more times a week, or
- My peak flow is less than \_\_\_\_\_ or
- I'm waking up at night because of my asthma. This is an important sign and I will book a next day appointment

If my asthma gets worse, I will:

- Take my preventer medicines as normal
- And also take \_\_\_\_\_ puffs of my blue reliever inhaler every four hours.

**WARNING!** If your blue reliever inhaler isn't working for more than one hour, you are having a severe asthma attack. Use your emergency action plan (see section 3) or call 999.

Other things to do if my asthma is getting worse \_\_\_\_\_

Remember to use my spacer with my inhaler if I have one.

If I don't have one, I'll check with my doctor or nurse if it would help me!

**3 I'm having an asthma attack if...**

- My reliever inhaler isn't helping or I need it more than every four hours, or
- I can't talk, walk or eat easily, or
- I'm finding it hard to breathe, or
- I'm coughing or wheezing a lot or my chest is tight/hurts, or
- My peak flow is less than \_\_\_\_\_

If I have an asthma attack, I will:

**Call for help**

Call 999 - don't be slow. Try to be calm.

Take one puff of my reliever inhaler (with my spacer if I have it) every 30 seconds up to a total of 10 puffs.

If I don't have my blue inhaler, or it's not helping, I need to call 999 straightaway.

While I wait for an ambulance, I can use my blue reliever again, every 30 to 60 seconds (up to 10 puffs) if I need to.

Even if I start to feel better - don't wait this to happen again, so I need to see my doctor or asthma nurse today.

### আপনার ব্যক্তিগত অস্টমা পরিকল্পনা

Personalized Asthma Action Plan (PAAP)

Name: \_\_\_\_\_ IC: \_\_\_\_\_ Personal Best PEF: \_\_\_\_\_ Litres Date of Plan: \_\_\_\_\_  
 Doctor: \_\_\_\_\_ Hospital/Clinic: \_\_\_\_\_ Phone No.: \_\_\_\_\_

**1 My usual asthma medicines**

My preventer inhaler is called \_\_\_\_\_ and its colour is \_\_\_\_\_

I take \_\_\_\_\_ puffs of my preventer inhaler in the morning and \_\_\_\_\_ puffs at night. I do this every day even if I feel well.

Other asthma medicines I take every day \_\_\_\_\_

My reliever inhaler is called \_\_\_\_\_

I take \_\_\_\_\_ puffs of my reliever inhaler when I wheeze or cough, my chest hurts or it's hard to breathe.

My best peak flow is \_\_\_\_\_

If I need my blue inhaler to do any sports or activity, I need to see my doctor or asthma nurse.

**2 My asthma is getting worse if...**

- I wheeze or cough, my chest hurts or it's hard to breathe, or
- I need my reliever inhaler (usually blue) three or more times a week, or
- My peak flow is less than \_\_\_\_\_ or
- I'm waking up at night because of my asthma. This is an important sign and I will book a next day appointment

If my asthma gets worse, I will:

- Take my preventer medicines as normal
- And also take \_\_\_\_\_ puffs of my blue reliever inhaler every four hours.

**WARNING!** If your blue reliever inhaler isn't working for more than one hour, you are having a severe asthma attack. Use your emergency action plan (see section 3) or call 999.

Other things to do if my asthma is getting worse \_\_\_\_\_

Remember to use my spacer with my inhaler if I have one.

If I don't have one, I'll check with my doctor or nurse if it would help me!

**3 I'm having an asthma attack if...**

- My reliever inhaler isn't helping or I need it more than every four hours, or
- I can't talk, walk or eat easily, or
- I'm finding it hard to breathe, or
- I'm coughing or wheezing a lot or my chest is tight/hurts, or
- My peak flow is less than \_\_\_\_\_

If I have an asthma attack, I will:

**Call for help**

Call 999 - don't be slow. Try to be calm.

Take one puff of my reliever inhaler (with my spacer if I have it) every 30 seconds up to a total of 10 puffs.

If I don't have my blue inhaler, or it's not helping, I need to call 999 straightaway.

While I wait for an ambulance, I can use my blue reliever again, every 30 to 60 seconds (up to 10 puffs) if I need to.

Even if I start to feel better - don't wait this to happen again, so I need to see my doctor or asthma nurse today.

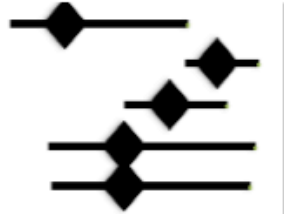


# Supported self-management for asthma

## An effective intervention

### HOSPITALISATIONS

Bailey 2009  
Boyd 2009  
Gibson 2002  
Tapp 2007  
RECURSIVE



### A&E ATTENDANCES

Boyd 2009  
Gibson 2002  
Tapp 2007  
RECURSIVE



### UNSCHEDULED CONSULTATIONS

Boyd 2009  
Gibson 2002



Relative risk Favours self-management Favours control



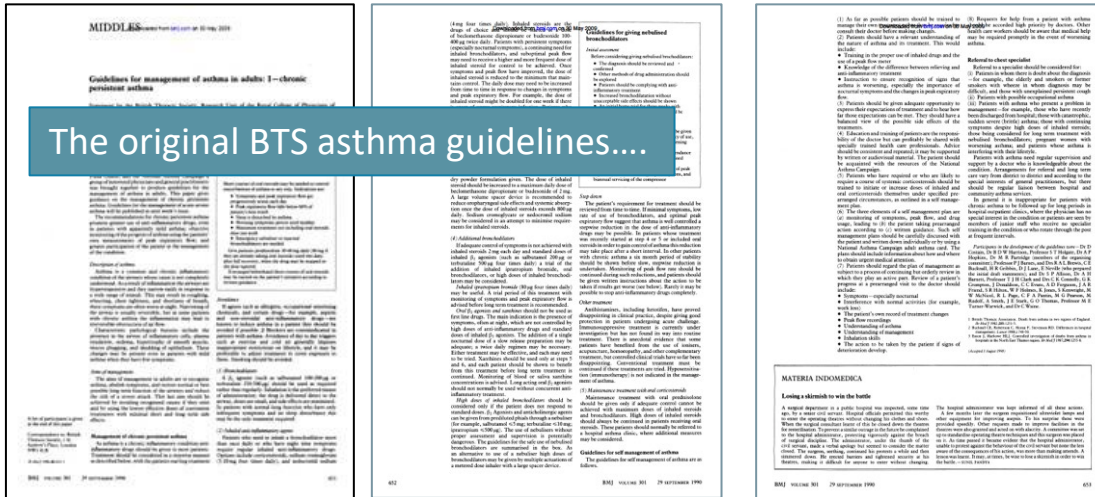
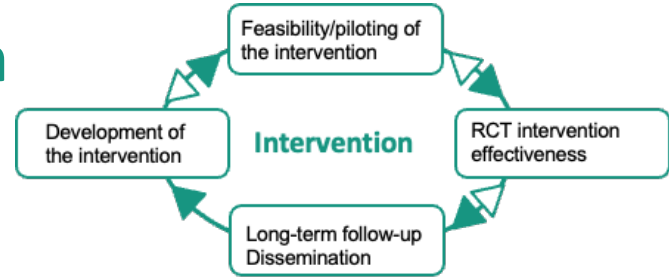
## Meta-review: 27 SRs (270 RCTs)

Pinnock et al. Systematic meta-review of supported self-management for asthma: a healthcare service perspective. *BMC Medicine* 2017;15:64



# Recommendations and dissemination

33 years ago ...

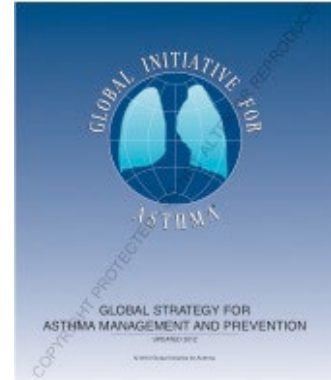
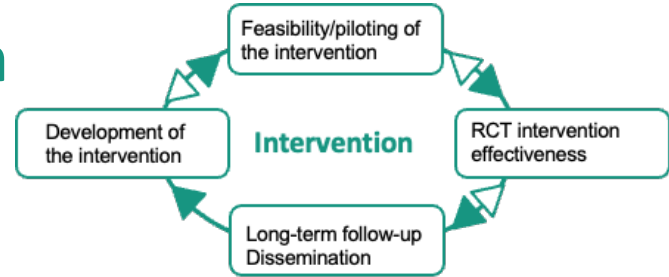


T2

“As far as possible patients should be trained to manage their own treatment rather than be required to consult their doctor before making changes”.

BMJ 1990;301:651-653

# Recommendations and dissemination

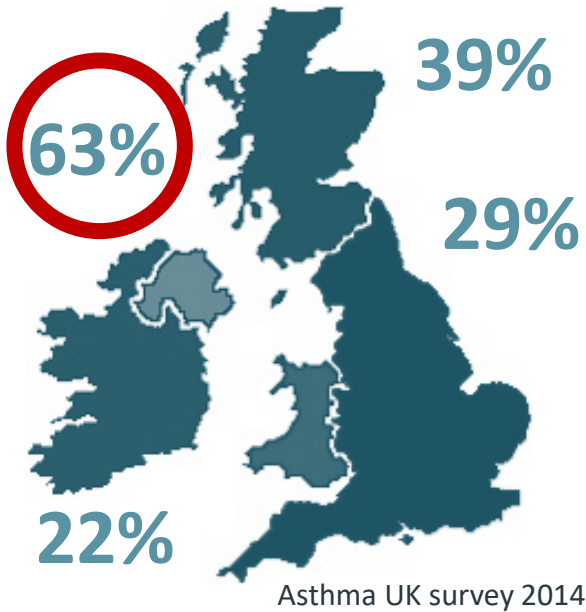


T2

A

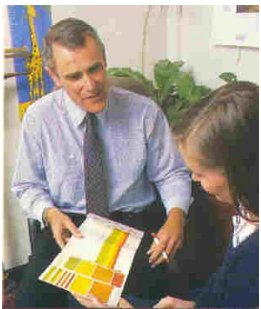
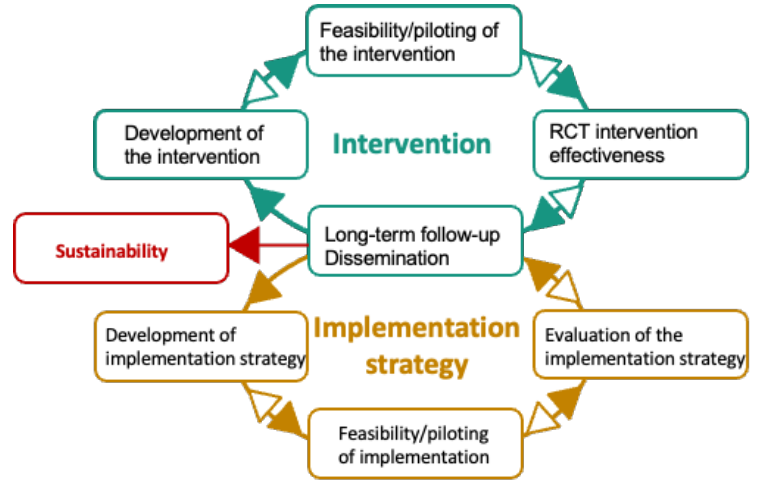
All people with asthma (and/or their parents or carers) should be offered self-management education which should include a written personalised asthma action plan and be supported by regular professional review

# The challenge of implementation



**30%** have an asthma action plan

6% had a self-management discussion in the clinical record



# Systematic review of implementation studies



Supported self-management can be implemented effectively in routine practice



Actively engaging patients

Training and motivating professionals

Supporting the organisation to prioritise and proactively support self-management.

T3

# Systematic review of implementation studies



Supported self-management can be implemented effectively in routine practice

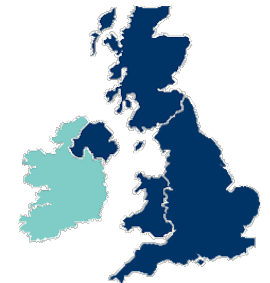
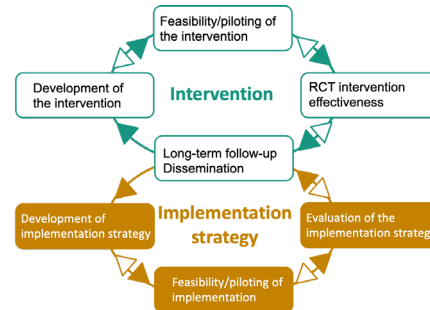


## IMPLementing IMProved Asthma self-management as RouTine



### Programme of work

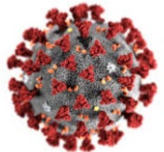
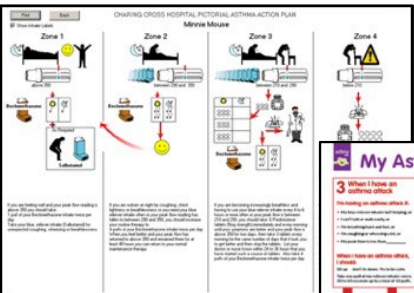
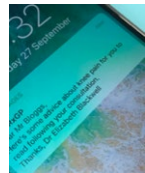
- Explore current practice
- Develop and pilot strategies
- Evaluate in UK-wide cluster RCT
- Understand the process and sustainability



T3



# Patient-facing strategies and resources



Hamour O, et al  
npjPCRM  
2020;30:48

T3





## Professional motivation and education

Systematic review: 15 educational interventions (18 papers)



Local opinion leaders

Addressing beliefs about consequences

Based on guidelines

Team building

Skill development: motivational interviewing

Behavioural regulation

McCleary et al for the IMP<sup>2</sup>ART team: *npj Prim Care Respir Med* 2018;28:42



McClatchey K, et al. *Trials* 2022;23:350

T3

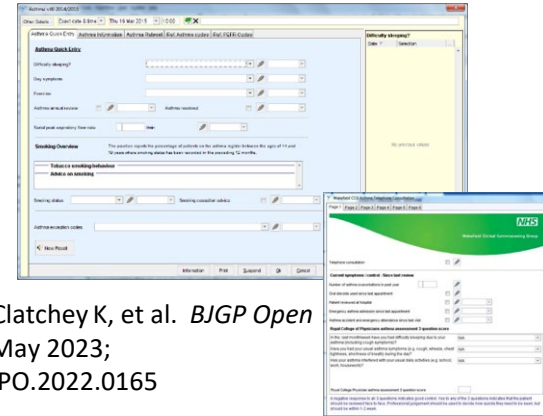




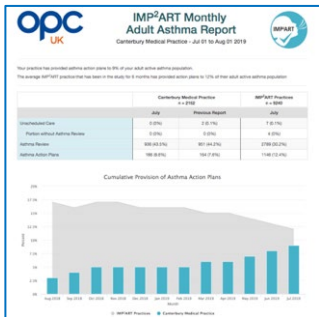
# Organisational strategies and routines

Qualitative interviews with general practices

Improve template



McClatchey K, et al. *BJGP Open*  
30 May 2023;  
BJGPO.2022.0165



Admin support  
Invitation



Asthma review template

Routine reviews  
Self-management

Asthma nurse



Acute asthma

No time  
GP consultation



Audit and feedback

Team-based training

T3

McClatchey K, et al, *J Eval Clin Pract*  
2023;23:350

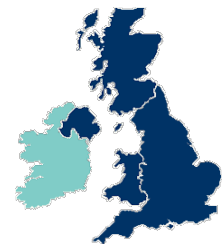
Morrow et al. *npj Prim Care Respir Med* 2017;27:45



# UK-wide cluster randomised implementation trial



144 practices



Health outcome  
Implementation outcome

Routine data



Unscheduled care  
Action plans

Health economic evaluation



T3

T4

Plan for sustainability





# Take home messages

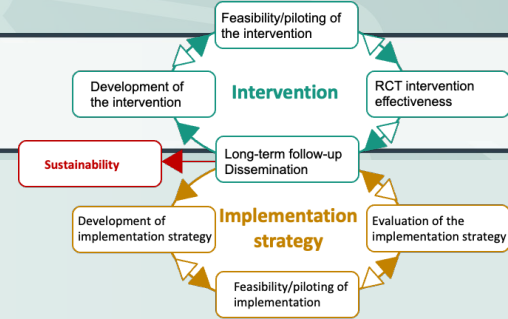
Distinguish between the (evidence-based) intervention and the implementation strategy that is the focus of implementation research.

Implementation is at least as complex as the intervention... and needs a cycle of development, feasibility testing, refining strategies and evaluation

Consider strategies to address the needs of the patient, professionals and the organisation

The context will strongly influence whether the implementation is successful...

There is a spectrum of trial design from efficacy → pragmatic effectiveness → implementation - and other approaches to evaluating implementation



- Broader inclusion criteria (Selected participants → populations)
- Increased flexibility for clinical judgement (Tightly controlled → embedded in routine care)
- Outcomes reflect patient perspectives and/or impact on health services.





**Thank you for listening!**  
**Any questions?**