



April 2017 – SUPPORT Summary of a systematic review

What are the effects of interventions to reduce waiting times for elective procedures?

Long waiting times for non-urgent procedures can cause distress among patients as well as adverse health consequences, and may be perceived as inappropriate healthcare planning. Interventions to reduce waiting times can ration or prioritise demand, expand capacity, or restructure referral or intake assessments of patients.

Key messages

- ➔ **Direct/open access and direct booking systems probably slightly decrease median waiting times and may decrease mean waiting times in hospital settings.**
 - The effects of direct/open access and direct booking systems on mean waiting times in outpatient settings, and on the proportion of patients waiting less than a recommended time are uncertain.
- ➔ **The effects of other interventions to reduce waiting times, including increasing the supply of services, are uncertain.**
- ➔ **The included studies were from high-income countries.**



Who is this summary for?

People making decisions about how to reduce waiting times for elective procedures

! This summary includes:

- **Key findings** from research based on a systematic review
- **Considerations about the relevance of this research** for low-income countries

✗ Not included:

- Recommendations
- Additional evidence not included in the systematic review
- Detailed descriptions of interventions or their implementation

This summary is based on the following systematic review:

Ballini L, Negro A, Malton, S, et al. Interventions to reduce waiting times for elective procedures. The Cochrane Database Syst Rev 2015; (2):CD005610.

What is a systematic review?

A summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise the relevant research, and to collect and analyse data from the included studies

SUPPORT was an international project to support the use of policy relevant reviews and trials to inform decisions about maternal and child health in low- and middle-income countries, funded by the European Commission (FP6) and the Canadian Institutes of Health Research.

Glossary of terms used in this report:
www.supportsummaries.org/glossary-of-terms

Background references on this topic:
See back page

Background

Elective health procedures are diagnostic or therapeutic procedures that are not delivered in emergency or urgent situations. Even when long waiting times do not have adverse health effects, they can cause distress for patients. They can also be perceived as inappropriate when patients' expectations are not met. It is important to keep waiting times at a safe and acceptable level, while ensuring quality, equity and efficient use of resources.

This review assessed the effects of any type of intervention targeted at reducing waiting times. The review authors did not cover all possible interventions (for example resource sharing strategies or remuneration schemes). Also, they considered three categories of interventions: ones that increase supply (expanding capacity of a healthcare provider), ones that reduce demand (rationing or prioritising patients), and ones that improve efficiency by eliminating redundancies or obstacles in the process of care (restructuring the intake assessment/referral process).

How this summary was prepared

After searching widely for systematic reviews that can help inform decisions about health systems, we have selected ones that provide information that is relevant to low-income countries. The methods used to assess the reliability of the review and to make judgements about its relevance are described here:

www.supportsummaries.org/how-support-summaries-are-prepared/

Knowing what's not known is important

A reliable review might not find any studies from low-income countries or might not find any well-designed studies. Although that is disappointing, it is important to know what is not known as well as what is known.

A lack of evidence does not mean a lack of effects. It means the effects are uncertain. When there is a lack of evidence, consideration should be given to monitoring and evaluating the effects of the intervention, if it is used.

About the systematic review underlying this summary

Review objective: To assess the effectiveness of interventions aimed at reducing waiting times for elective care, both diagnostic and therapeutic.

Types of	What the review authors searched for	What the review authors found
Study designs & Interventions	Randomised trials, controlled before-after studies, and interrupted time series studies of any type of regulatory/administrative, economic, clinical or organisational intervention aimed at reducing waiting times for access to elective diagnostic or therapeutic procedures	2 cluster-randomised trials, 1 randomised trial, and 5 reanalysed interrupted time series studies of interventions rationing or prioritising demand (1), expanding capacity (1 with a co-intervention), and restructuring the intake assessment/referral process (7)
Participants	Healthcare providers of any discipline/area, and patients referred to any type of elective procedure	7 hospitals, 1 outpatient clinic and 135 general practices/primary care, performing elective procedures for ear-nose-throat referrals (1), uncomplicated spinal surgery (1), dermatology (1), elective surgery (1), colposcopy for abnormal cervical cytology (1), any paediatric clinic conditions treated in an outpatient clinic (1), laparoscopic sterilisation (1), and urological interventions (1)
Settings	Any setting	Studies in UK (5), US (2), and Australia (1)
Outcomes	Number or proportion of participants whose waiting times were above or below a time threshold, mean or median waiting times, safety outcomes (mortality, morbidity, complication rates), and costs	Number and proportion of participants waiting longer (2) or less (2) than a recommended time to be attended or get an appointment, effects on waiting time (5), direct and indirect costs (2)

Date of most recent search: November 2013

Limitations: This is a well-conducted systematic review with only minor limitations.

Ballini L, Negro A, Malton, S, et al. Interventions to reduce waiting times for elective procedures. The Cochrane Database Syst Rev 2015; (2):CD005610.

Summary of findings

The eight included studies assessed the effect of two types of interventions: interventions to reduce demand by rationing or prioritising patients; and interventions to restructure referral processes (which includes direct/open access and direct booking systems, distant consultancy and single generic waiting list). The review did not find studies assessing the effect of increasing capacity.

One study measuring the effect of distant consultancy was not reported in this summary, since control group results were not reported.

1) Interventions to reduce or prioritise demand

The review included one interrupted time series study with high risk of bias in patients scheduled for any type of elective surgery in one hospital in Australia.

→ **It is uncertain whether prioritising demand decreases waiting times for elective surgery. The certainty of this evidence is very low.**

About the certainty of the evidence (GRADE) *

⊕⊕⊕⊕

High: This research provides a very good indication of the likely effect. The likelihood that the effect will be substantially different† is low.

⊕⊕⊕○

Moderate: This research provides a good indication of the likely effect. The likelihood that the effect will be substantially different† is moderate.

⊕⊕○○

Low: This research provides some indication of the likely effect. However, the likelihood that it will be substantially different† is high.

⊕○○○

Very low: This research does not provide a reliable indication of the likely effect. The likelihood that the effect will be substantially different† is very high.

* This is sometimes referred to as 'quality of evidence' or 'confidence in the estimate'.

† Substantially different = a large enough difference that it might affect a decision

See last page for more information.

Interventions to reduce demand by rationing or prioritising patients			
People	Patients scheduled for elective surgery		
Settings	A public hospital in Australia		
Intervention	Prioritising demand		
Comparison	No intervention		
Outcomes	Effect of Intervention	Certainty of the evidence (GRADE)	Comments
Number of patients waiting less than a specific time threshold	-	⊕○○○ Very low	The authors reported changes in slope, although direction and magnitude of effect is not clear.
GRADE: GRADE Working Group grades of evidence (see above and last page)			

2) Interventions to restructure referral processes

Two randomised trials and two interrupted time series studies evaluated the effects of direct/open access and direct booking systems. They were conducted in hospitals (3) and ambulatory settings (1) in the UK (3) and US (1).

→ Direct/open access and direct booking systems

- probably slightly decrease median waiting times. The certainty of this evidence is moderate.
 - may decrease mean waiting times in hospital settings. The certainty of this evidence is low.
 - have uncertain effects on mean waiting times in outpatient settings. The certainty of this evidence is very low.
 - have uncertain effects on the proportion of patients waiting less than a recommended time. The certainty of this evidence is very low.
- It is uncertain whether distant consultancy decreases mean waiting times. The certainty of this evidence is very low.
- It is uncertain whether single generic lists increase the number of participants waiting less than a recommended time. The certainty of this evidence is very low.

Interventions to restructuring referral processes				
People	Patients needing elective specialist ambulatory visits, surgery, or procedures			
Settings	Hospital and ambulatory care in UK and USA			
Intervention	Direct/open access and direct booking systems, single generic waiting list and distant consultancy			
Comparison	No intervention			
Outcomes	Impact or Absolute effect of intervention		Certainty of the evidence (GRADE)	Comments
	Without Intervention	With Intervention		
Direct/open access and direct booking systems				
Mean waiting time	127 days	108 days	⊕⊕○○ Low	1 randomised trial with high risk of bias and important in-directness in laparoscopic sterilisation
	Difference: 19 days			
	-		⊕○○○ Very low	1 reanalysed interrupted time series study with high risk of bias in a paediatric outpatient clinic. Authors reported an effect favouring the intervention
Median waiting time reduction	70 days	55 days	⊕⊕⊕○ Moderate	1 randomised trial in patients with urinary tract symptoms
	Difference: 15 days			
	24 days	18 days	⊕⊕⊕○ Moderate	1 randomised trial in patients with microscopic haematuria
	Difference: 6 days			
Proportion of patients waiting less than specific time threshold	-		⊕○○○ Very low	1 reanalysed interrupted time series study with high risk of bias of colposcopy for abnormal cervical cytology
Distant consultancy				
Mean waiting time	-		⊕○○○ Very low	1 reanalysed interrupted time series study with high risk of bias and serious imprecision, in ear, nose, and throat patients
Single generic waiting list				
Number of patients waiting less than a specific time threshold	-		⊕○○○ Very low	1 reanalysed interrupted time series study with high risk of bias in patients with spinal cord injury
GRADE: GRADE Working Group grades of evidence (see above and last page)				

Relevance of the review for low-income countries

→ Findings	▷ Interpretation*
APPLICABILITY	
→ The studies included in the review were from high-income countries (UK, US and Australia) for selected conditions or type of patients.	▷ The effect of the interventions included in the review would likely depend on several factors, including: <ul style="list-style-type: none"> - Waiting list length - Resource availability - Healthcare workers availability - IT development - Health system structure
EQUITY	
→ The studies included did not report any differential effect of the interventions on disadvantaged populations.	▷ Interventions might increase inequity if they are not focused on resources-disadvantaged people or underserved areas. ▷ Interventions might be more difficult to design and implement for disadvantaged populations due to a lack of available resources.
ECONOMIC CONSIDERATIONS	
→ The review did not report the cost-effectiveness of interventions. → Two studies incorporated direct and indirect costs as outcomes, but no data were reported in the review.	▷ Both the effects and the costs of the interventions are uncertain. ▷ Costing studies should be considered before implementing interventions.
MONITORING & EVALUATION	
→ There were no studies or the certainty of the evidence was very low for most interventions and outcomes.	▷ Interventions to reduce waiting times for elective procedures should be rigorously monitored and evaluated. Potential adverse effects and costs, as well as potential benefits should be measured.

*Judgements made by the authors of this summary, not necessarily those of the review authors, based on the findings of the review and consultation with researchers and policymakers in low-income countries. For additional details about how these judgements were made see: www.supportsummaries.org/methods

Additional information

Related literature

Olisemeke B, Chen YF, Hemming K, Girling A. The effectiveness of service delivery initiatives at improving patients' waiting times in clinical radiology departments: a systematic review. *J Digit Imaging* 2014; 27:751–78.

Siciliani L, Borowitz M, Moran V. [Waiting Time Policies in the Health Sector: What Works?](#) OECD Health Policy Studies, OECD Publishing, 2013.

Kreindler SA. Policy strategies to reduce waits for elective care: a synthesis of international evidence. *Br Med Bull* 2010; 95:7–32.

Appleby S, Boyle N, Devlin M, et al. [Sustaining reductions in waiting times: identifying successful strategies](#). Final report to the Department of Health. London: The King's Fund, 2005.

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Conflict of interest

None declared. For details, see: www.supportsummaries.org/coi

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This review should be cited as

Ballini L, Negro A, Malton, S, et al. Interventions to reduce waiting times for elective procedures. The Cochrane Database Syst Rev 2015; (2):CD005610.

The summary should be cited as

Mansilla C. What are the effects of interventions to reduce waiting times for elective procedures? A SUPPORT Summary of a systematic review. April 2017. www.supportsummaries.org

About certainty of the evidence (GRADE)

The “certainty of the evidence” is an assessment of how good an indication the research provides of the likely effect; i.e. the likelihood that the effect will be substantially different from what the research found. By “substantially different” we mean a large enough difference that it might affect a decision. These judgements are made using the GRADE system, and are provided for each outcome. The judgements are based on the study design (randomised trials versus observational studies), factors that reduce the certainty (risk of bias, inconsistency, indirectness, imprecision, and publication bias) and factors that increase the certainty (a large effect, a dose response relationship, and plausible confounding). For each outcome, the certainty of the evidence is rated as high, moderate, low or very low using the definitions on page 3.

For more information about GRADE:
www.supportsummaries.org/grade

SUPPORT collaborators:

The Cochrane Effective Practice and Organisation of Care Group (EPOC) is part of the [Cochrane Collaboration](#). The Norwegian EPOC satellite supports the production of Cochrane reviews relevant to health systems in low- and middle-income countries. www.epocoslo.cochrane.org

The Evidence-Informed Policy Network (EVIPNet) is an initiative to promote the use of health research in policymaking in low- and middle-income countries. www.evipnet.org

The Alliance for Health Policy and Systems Research (HPSR) is an international collaboration that promotes the generation and use of health policy and systems research in low- and middle-income countries. www.who.int/alliance-hpsr

Norad, the Norwegian Agency for Development Cooperation, supports the Norwegian EPOC satellite and the production of SUPPORT Summaries. www.norad.no

The Effective Health Care Research Consortium is an international partnership that prepares Cochrane reviews relevant to low-income countries. www.evidence4health.org

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