

Nurse-led clinics for hypertension – what do they offer?

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Agenda

- What is the evidence for nurse-led clinics for hypertension?
- Possible benefits of nurse-led clinics
- How can it be delivered? Organisation of a local clinic as an example

-There is no conflict of interest-



Nurse-led clinics for hypertension

What is the evidence?

- Pooling of 12 studies: -13 mmHg reduction in SBP and -8mmHg in DBP compared with usual care
- Systematic review concludes that studies on nurse-led hypertension clinics in secondary care (6) were too different to combine

Fahey et al. Cochrane database syst. Review 2005;1

Clark C et al. Nurse-led interventions to improve control of blood pressure in people with hypertension. Syst review & metaanalysis. 2010

Nurse-led clinics for hypertension

What is the evidence?

- -19,6 mmHg reduction in SBP vs. 6,6 mmHg in SBP in usual care group for patients with diabetes and hypertension
- 27 % reached goal compared to 24 % in usual care for patients with diabetes and hypertension

Nurse-led clinics for hypertension

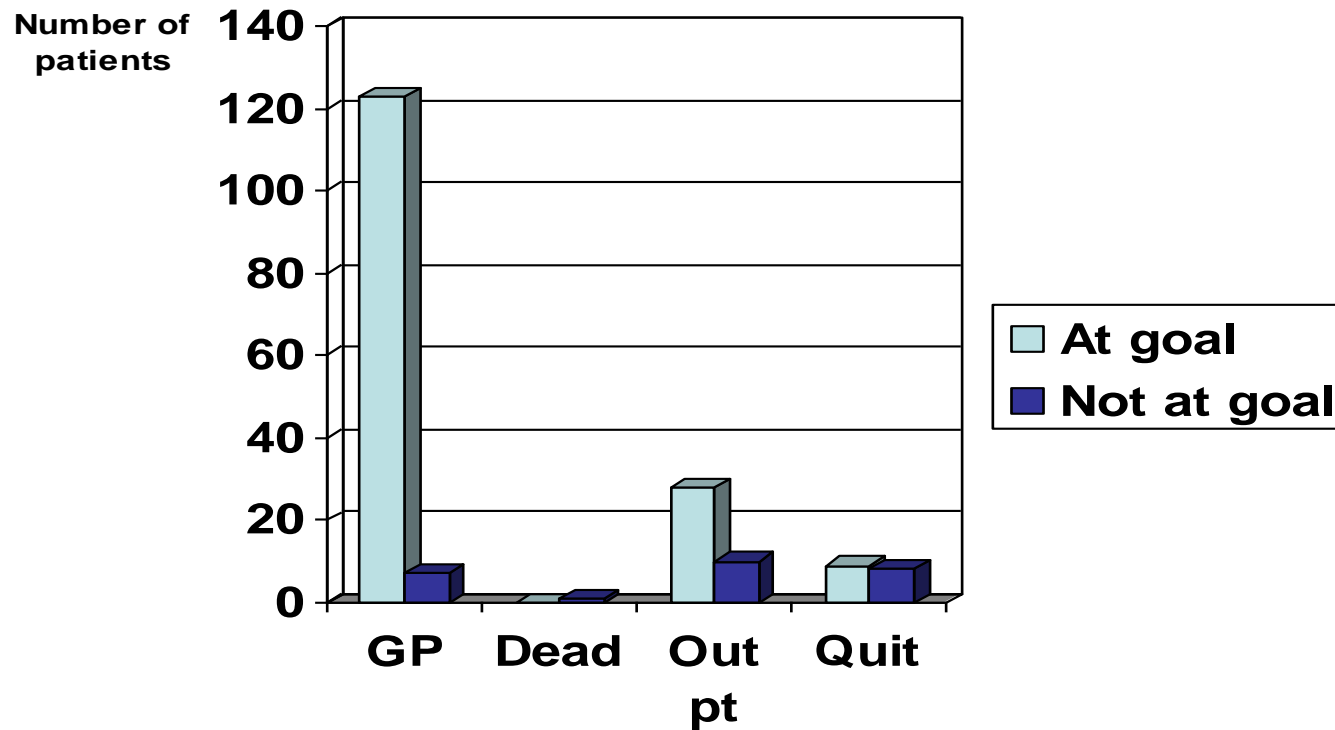
What is the evidence?

- Reduction of 37 vs. 17 mmHg in SBP and 21 vs. 10 mmHG in DBP comparing nurse-led and usual care
- Two randomised controlled trials found no significant effect of nurse-led clinics.

Guerra Riccio, GM et al. Am. J Hypertension. 2004
Litaker et al: Interprof Care 2003
Ko GT, Li JK, Kan EC, Lo MK. Diabet Med
2004;21:1274-9

Nurse-led clinics for hypertension

What is the evidence?





Nurse-led clinics for hypertension

What is the evidence?

- Promising area
- More evidence
- Larger trials

Nurse-led clinics for hypertension

- Possible benefits?



Nurse-led clinics for hypertension

Possible benefits ?

- Long visits
- Regular follow-ups and persistence
- Broad focus on hypertension
- Focus on other cardiovascular risk factors

Nurse-led clinics for hypertension

Possible benefits ?

- Blood pressure measured according to guidelines

Of 110 patients 47% had well-controlled BP when measured according to protocol (Dean et al. Family Practice; 2007).

- Individual patient education – empowerment

- Doctors inertia less likely

6 times more likely to have their medicine adjusted compared to patients seeing doctors (Denver et al. Diabetes Care; 2003)

Nurse-led clinics for hypertension

Possible benefits ?

- Focus on promoting compliance

No effect of nurse-led adherence support on medication adherence or blood pressure
(Schroeder et al. Family practice. 2004)

- Advanced home blood pressure monitoring

19,03 mmHg in nurse-led teleconsultation group vs. -7,97 without teleconsultations
(Chiu et. Al. Int. J. of nursing studies. 2010)

Nurse-led clinics for hypertension

How can it be delivered ? A local example



Nurse-led clinic for hypertension
Centre of excellence
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How can it be delivered ?

A local example

Education of nurses working in the hypertension clinic:

- Experienced cardiovascular nurses
- 20 hours training by senior consultants in the division of cardiology
- Topics included: Hypertension pathophysiology, epidemiology, antihypertensive treatment and non pharmacological treatment

Nurse-led clinics for hypertension

How can it be delivered ? A local example

- Patients with inadequately controlled hypertension
- Examination programme and medical plan by doctor
- First nurse scheduled visit is 60 min, following visits 30 min
- Relatives invited to participate

Nurse-led clinics for hypertension

How can it be delivered ? A local example

- Patient's history with hypertension and treatment
- Correct blood pressure measurement – clinic and home
- Initiating patient education
- Risk assessment

Nurse-led clinics for hypertension

How can it be delivered ? A local example

- Teacher – patient education:
 - What is blood pressure
 - The dangers of high blood pressure
 - How the medicine works
 - Side effects
- Motivate changes in life style
- Compliance

Nurse-led clinics for hypertension

How can it be delivered ? A local example

Risk factors	"High normal" SB: 130-139	Grad 1 SB:140-159	Grad 2 SB:160-179	Grad 3 SB>180
None		Low	Middle	High
1-2 risk factors		Middle	Middle	Very high
>3 risk factors Organic disease		High	High	Very high
Diabetes Renal disease Cardiovascular Disease	Very high	Very high	Very high	Very high

Nurse-led clinics for hypertension

How can it be delivered ? A local example

- Non-pharmacologic treatment
- Stepwise increments in antihypertensive treatment algorithm
- Special plan by cardiologist

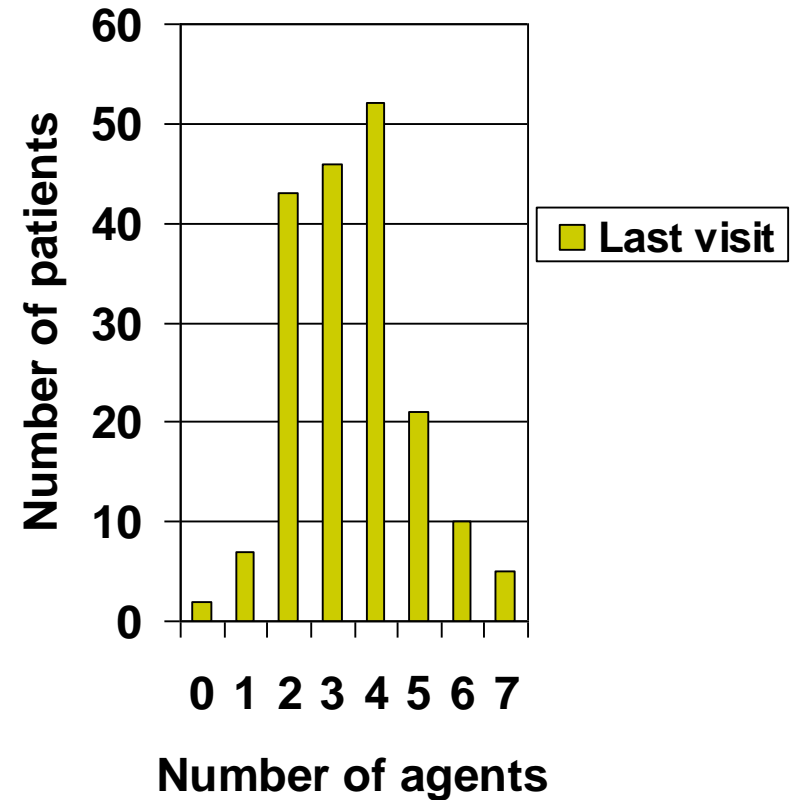
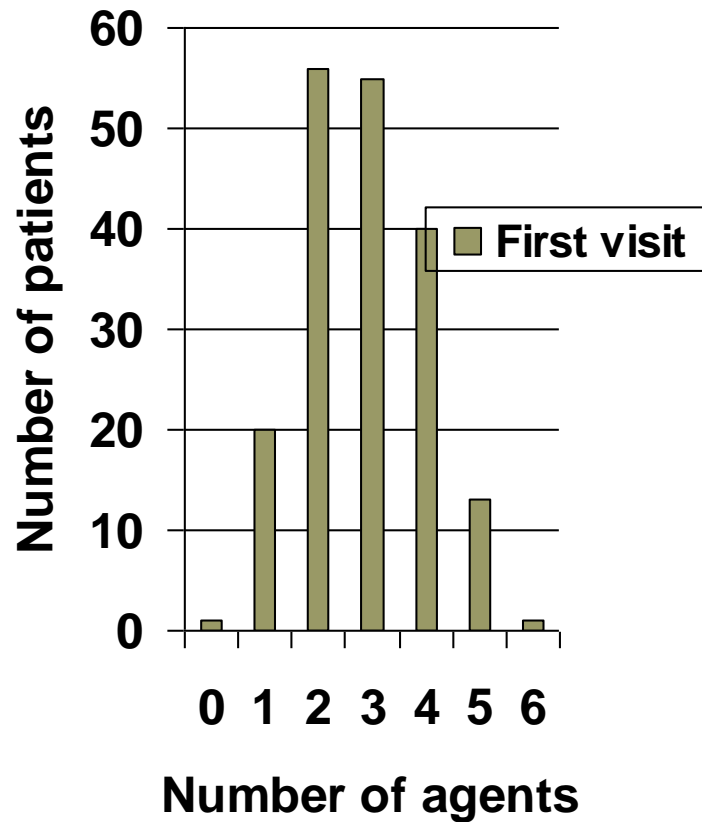
Nurse-led clinics for hypertension

How can it be delivered ? A local example



Nurse-led clinics for hypertension

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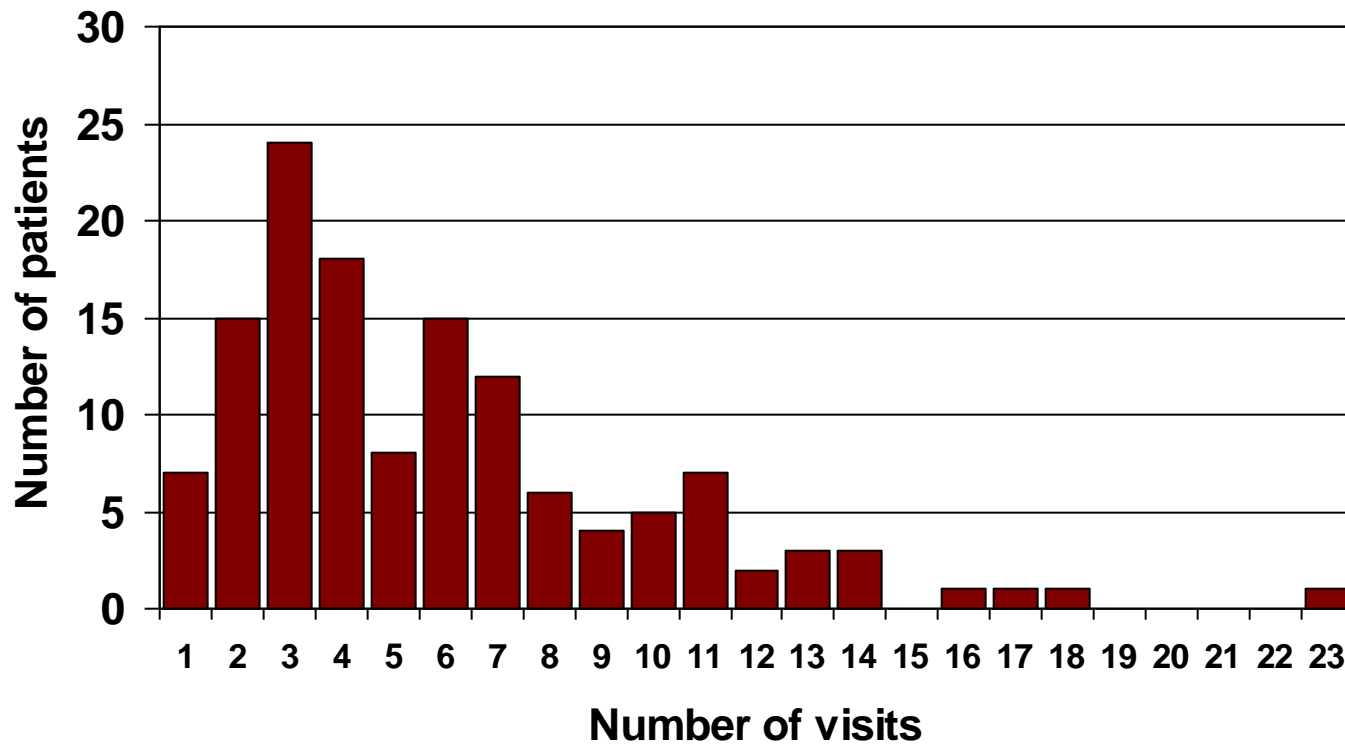
Nurse-led clinics for hypertension

How can it be delivered ? A local example

- Patients attend the clinic until target blood pressure is reached
- Final measurement based on home- or 24 hour BP measurements
- 95 % of the patients achieved target BP

Nurse-led clinics for hypertension

How can it be delivered ? A local example





Thank you

- Grant from The ESC

- Collaborators;
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 - Zwisler, Ann-Dorthe Zwisler; Bentzen. National Institute of Public Health, Denmark.