

Undertaking Research Relevant to our Practice

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In this session

- Why is research important?
- Focus on CVD and minority ethnic groups
- Highlight **challenges** and some **solutions** for recruitment
- The Ethnic-Echocardiographic Heart of England Screening Study (E-ECHOES)



Sir Luke Fildes: The Doctor 1887, Oil on canvas, 1664 x 2419 mm frame: 2075 x 2855 x 210 mm.

GMC Good Medical Practice Review 2012

‘Research involving people directly or indirectly is vital in improving care and reducing uncertainty for patients now and in the future, and improving the health of the population as a whole.’

Groups commonly excluded from research?

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Women, older persons, and ethnic minorities: factors associated with their inclusion in randomised trials of statins 1990 to 2001

Heart 2003 89: 327-328

Does this matter?

'Lack of consideration of external validity is the most frequent criticism by clinicians of RCTs, systematic reviews, and guidelines'

Rothwell Lancet 2005; 365:82

The aim of health research is to determine the best strategies for preventing and treating disease and to inform health policy

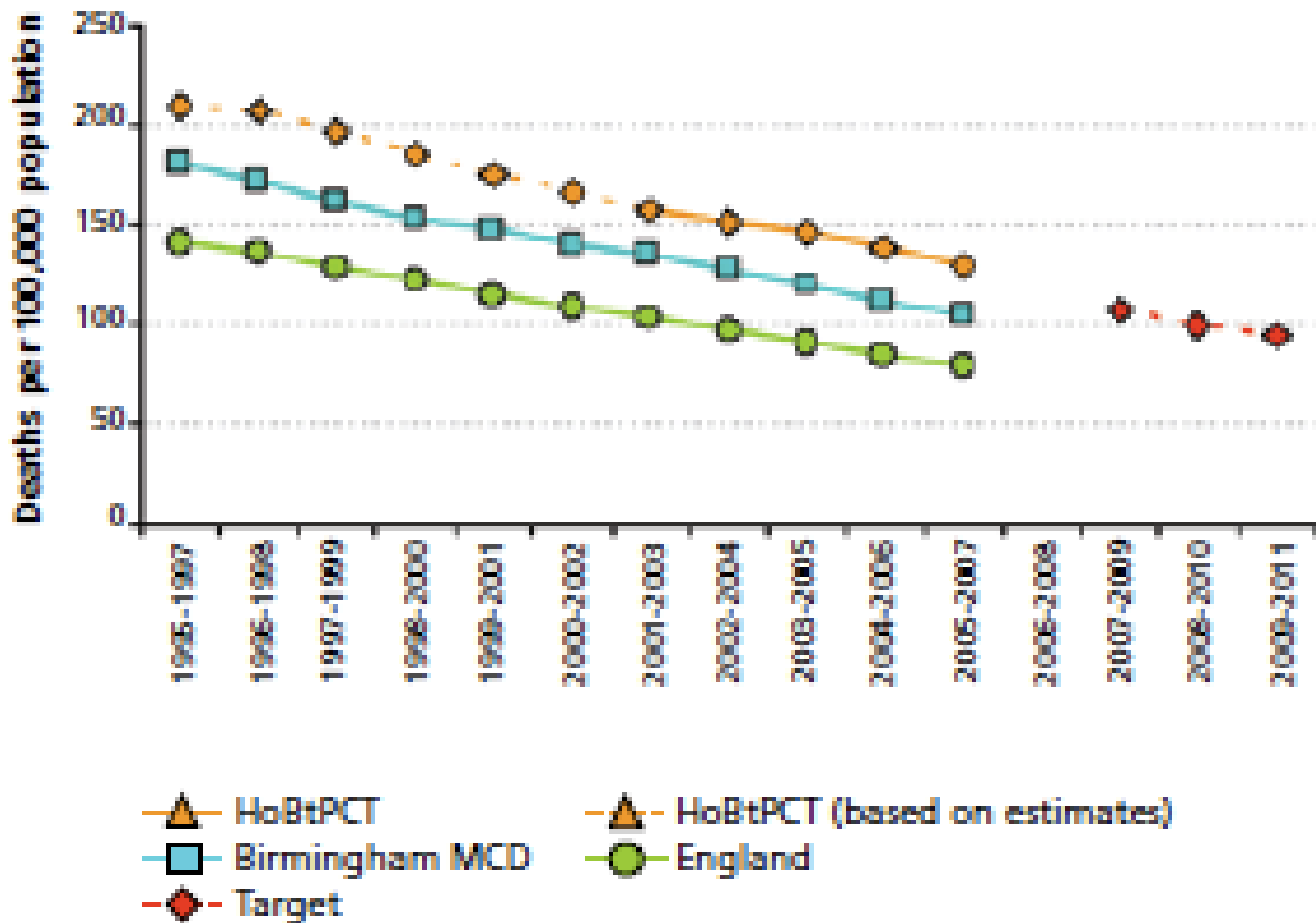
SMR for IHD in men (20-74 yrs)

Bangladeshi	151 (136-167)
Pakistani	148 (138-158)
Indian	142 (137-147)
Irish	124 (120-127)
White	100
Caribbean	62 (58-67)
Chinese	44 (36-54)

SMRs (95% CI) for stroke in E & W by country of birth, 1989-92

Country of birth	Men	Women
Total population	100	100
Scotland	125 (115-136)	125 (113-137)
Ireland	138 (128-148)	123 (113-133)
East Africa	114 (86-147)	122 (88-164)
West Africa	271 (210-344)	181 (118-265)
Caribbean	168 (151-186)	157 (136-179)
South Asia	155 (143-168)	141 (127-157)

Figure 2.10: Cardiovascular mortality: persons under 75⁴²



The Ethnic-Echocardiographic Heart of England Screening Study (E-ECHOES)

Paramjit Gill, Melanie Calvert, Russell Davis,
Michael Davies, Nick Freemantle, Gregory Lip

on behalf of the E-ECHOES Investigators



Heart failure

- clinical syndrome diagnosed by symptoms, signs & objective evidence of structure/function of resting heart (ESC Guidelines 2008)
- common, chronic disabling condition
- 30-40% die within year of diagnosis
- Definite HF **1%** amongst UK White ethnic group (**Davies 2001**)
- studies to date have not established the prevalence HF amongst the Black and minority ethnic communities

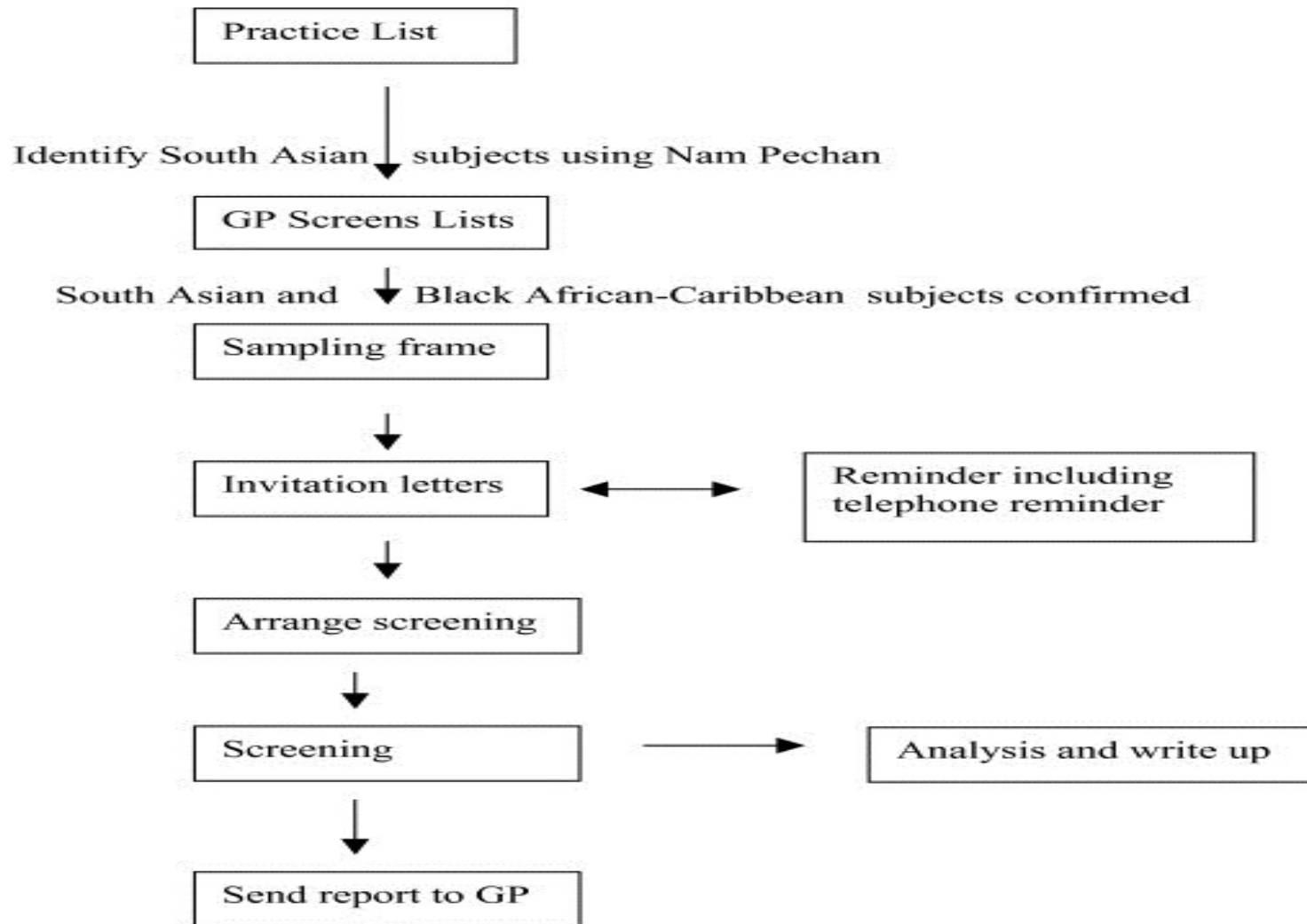
Study design

- cross-sectional population survey
- undertaken in inner city Birmingham
- men and women 45 yrs and over
- 3,000 South Asians; 2,000 Black African-Caribbean
- over 3 years
- questionnaire incorporating targeted clinical history taking, physical examination, ECG & ECHO

Challenge 1

- How to identify South Asian and Black African-Caribbean subjects?
- Practice ethnic recording variable and generally low

Flow of participants through study



Challenge 2

Given very high proportion of non-English speakers and illiteracy amongst these communities, how to recruit to study?


Shoe leather epidemiology!



e-echoes
 Echoes Echocardiography Heart of England Screening Study

THIS PRACTICE IS TAKING PART IN THE HEART FAILURE STUDY

FOR FURTHER DETAILS PLEASE CONTACT
 Jaskiran Dhillon Telephone 0800 0123 550

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
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She can't stop them from...
 ...





Community Radio Unity FM

Assessment

- Questionnaire including ethnic group, smoking
 - Examination – ht, wt, BP...
 - ECG
 - ECHO
 - Bloods
- ...and **feedback** results to Practice with subject consent



LA Ao Diam 3.85 cm
LA Diam 2.74 cm
LA/Ao 0.71

260406 1407:10 35 RS Card_V MI 1.0 Tls 0.4 HR 206

- Generic
- L.V Study
- L.A/Ao
- R.V Study
- D-E Fusion
- Slope Caliper
- Caliper
- Time
- Heart rate
- Dimension
- Time
- Size of leaflet
- Tissue Tuning
- Exit

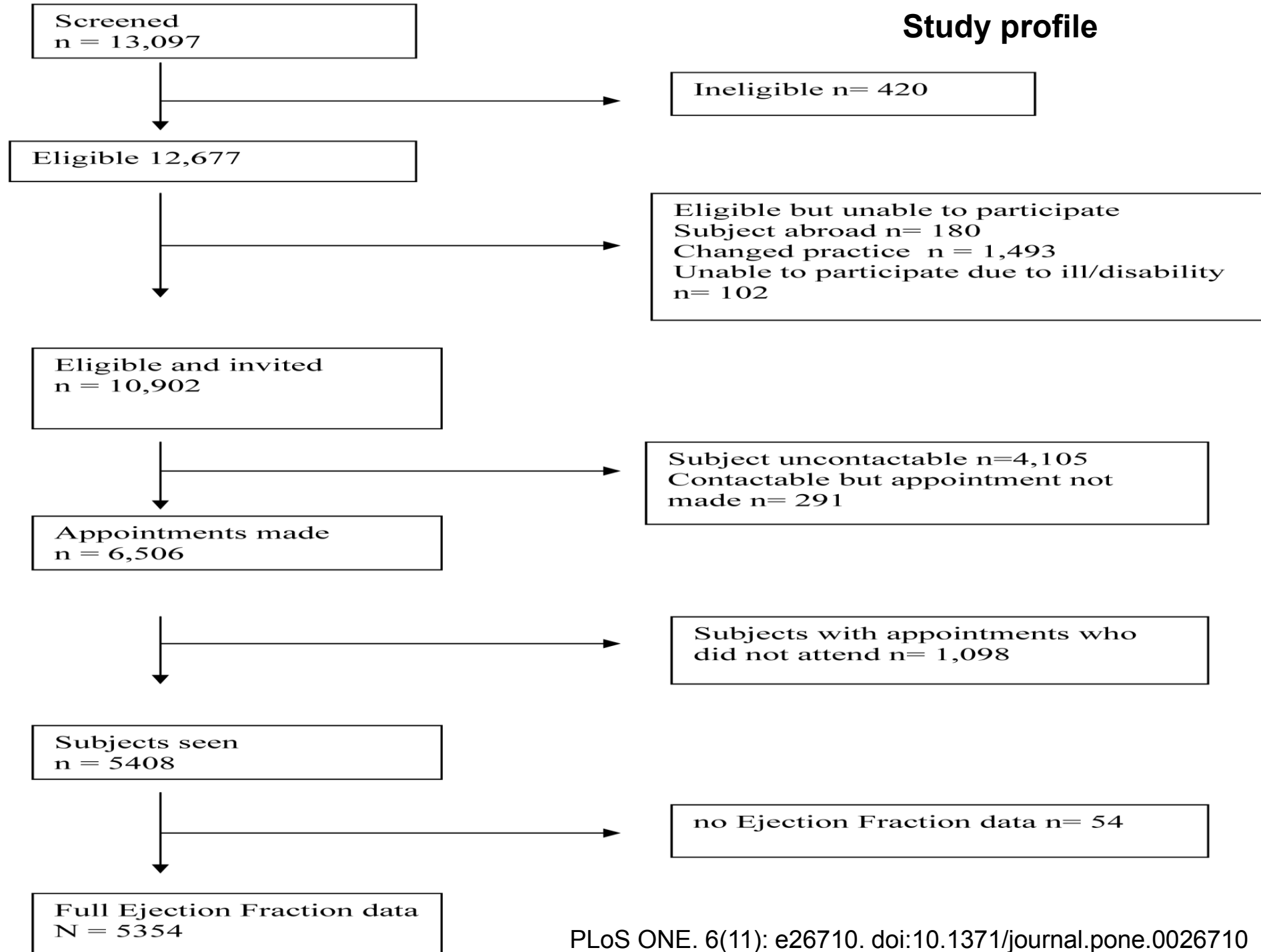
Vivid-i



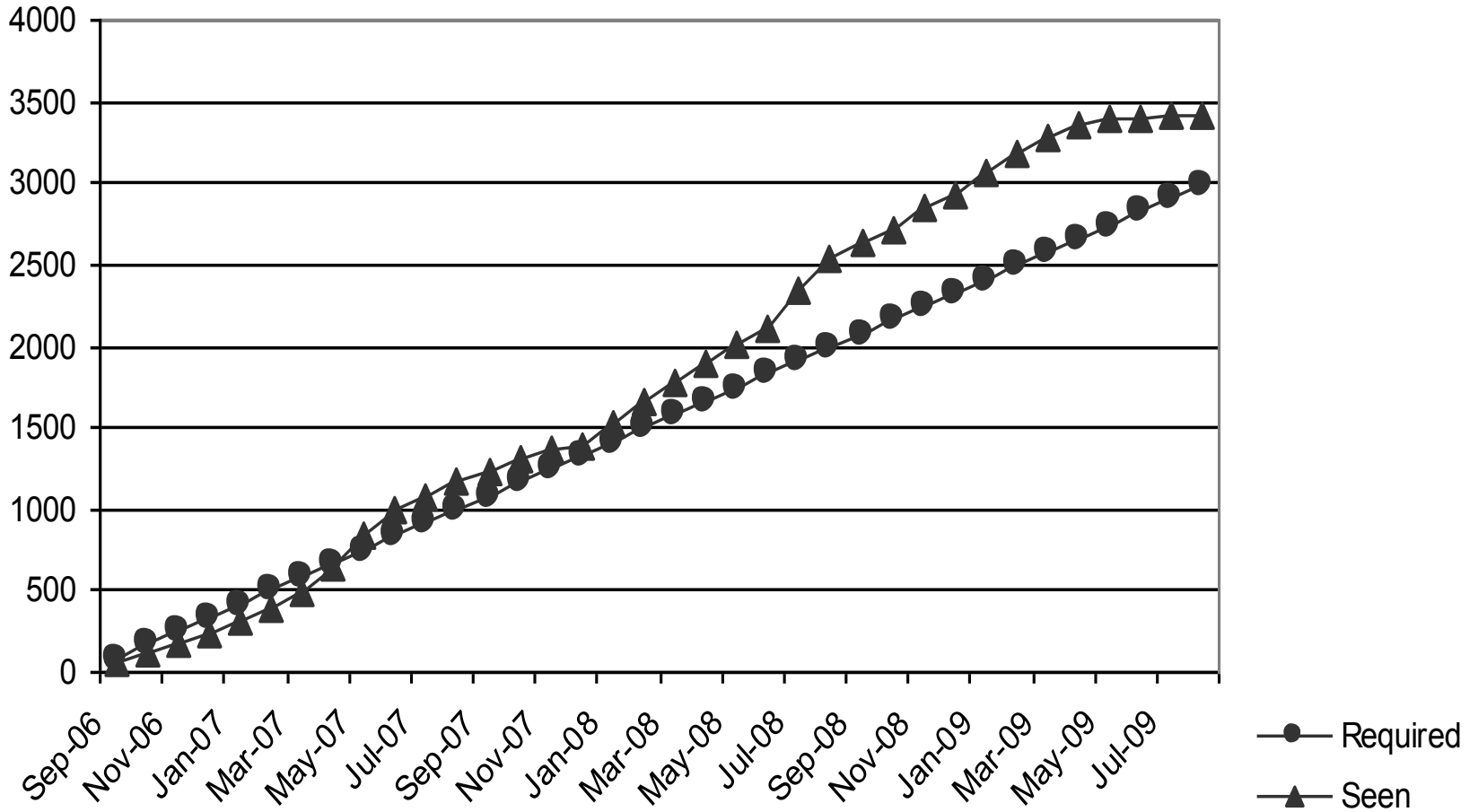


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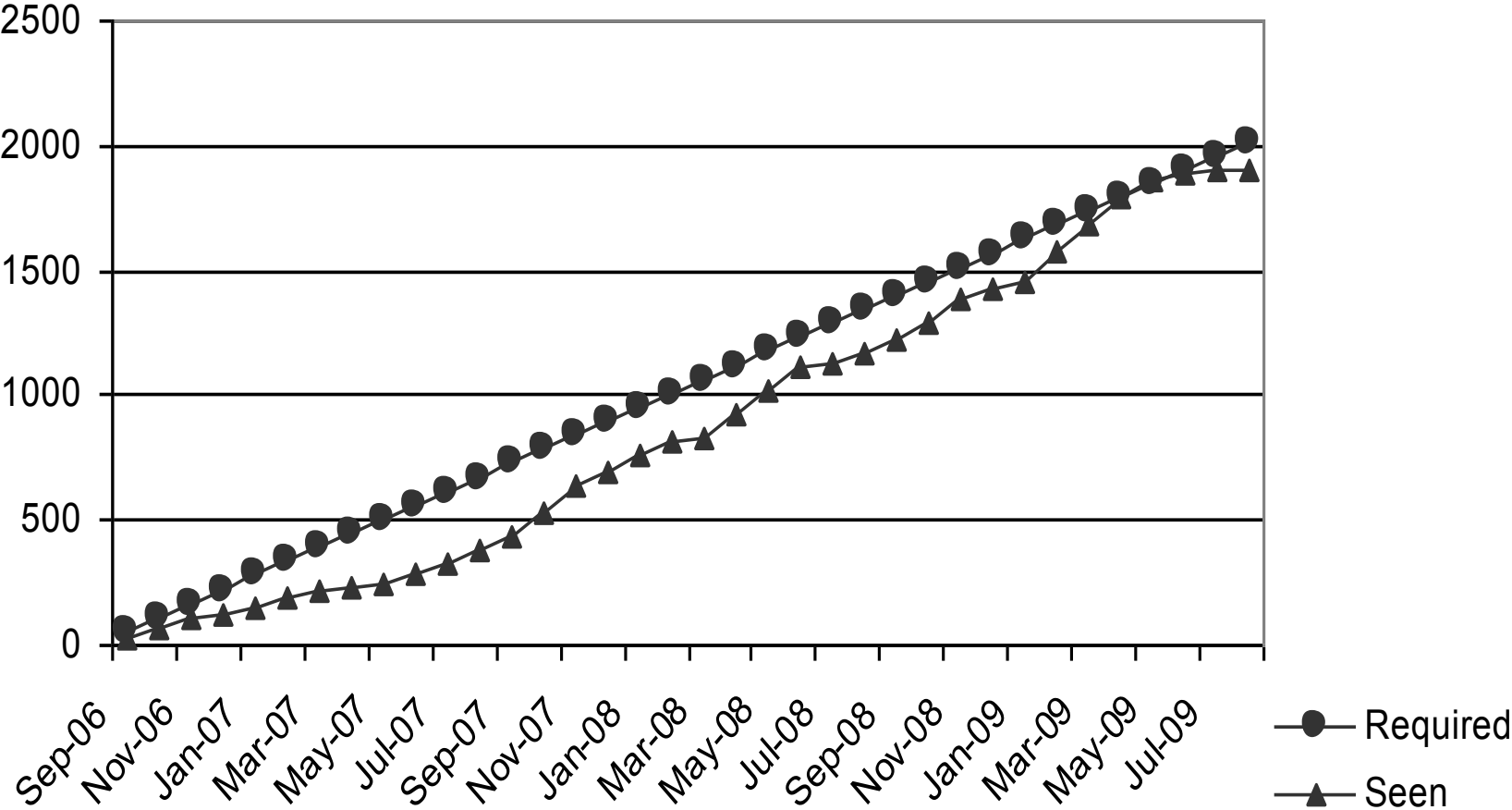
Study profile



South Asians: Total seen 3442



Black African-Caribbean : Total seen 1912



Prevalence of Left Ventricular Systolic Dysfunction and Heart Failure (%)

	South Asian	Black African-Caribbean	All
	3442	1912	5354
EF (%)			
<40	42 (1.22%; 95% CI 0.88 to 1.65%)	17 (0.89%; 95% CI 0.52 to 1.42%)	59 (1.10%; 95% CI 0.84 to 1.42%)
40 to 50	41 (1.19%; 95% CI 0.86 to 1.61%)	16 (0.84%; 95% CI 0.48 to 1.36%)	57 (1.06%; 95% CI 0.81 to 1.38%)
>50	3359 (97.59%; 95% CI 97.02 to 98.07%)	1879 (98.27%; 95% CI 97.58 to 98.81%)	5238 (97.83%; 95% CI 97.41 to 98.21%)
LV Systolic Heart Failure			
EF <40 and NYHA ≥2	28 (0.81%; 95% CI 0.54 to 1.17%)	12 (0.63%; 95% CI 0.32 to 1.09%)	40 (0.75%; 95% CI 0.53 to 1.02%)

EF Ejection Fraction.

NYHA New York Heart Association.

doi:10.1371/journal.pone.0026710.t003

Conclusion

- first, large, community prevalence study in under-researched minority communities in the UK
- It is possible to recruit from so-called hard-to-reach communities
- LVSD and HF prevalence appears lower than expected but comparable to that of the general population
- high response rate with objective evidence of HF

- Seek advice/collaborate as pockets of excellence in recruiting
- Consider language, sex, religion and other considerations
- Freephone number
- Involve Community groups throughout all stages of study
- General practice/community/religious centres
- Personalised/face-to-face strategies
- Media
- Role of **GP** is vital

OUTPUTS

Involving interpreters in research studies

3 PhD's

31 publications

Gillian Plumridge, Sabi Redwood, Sheila Greenfield, Nasreen Akhter, Raja Chowdhury, Abdul Khalade, Paramjit Gill

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It is important to include non English speakers in health services research to ensure not only the generalisability of findings but also to address health inequalities and promote social justice. One approach is to use interpreters but there is little guidance for working with an interpreter in interviews. Involving an interpreter presents challenges in the planning and conduct of research interviews which can be minimised by an awareness of various theoretical and practical implications and of potential pitfalls. Drawing both on our experiences of involving interpreters in research and on the literature, we raise some issues that researchers need to consider.

Journal of Health Services Research & Policy Vol 17 No 3, 2012: 190–192

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Under-representation of minority ethnic groups in cardiovascular research: a semi-structured interview study

Paramjit S Gill ✉, Gill Plumridge, Kamlesh Khunti, Sheila Greenfield

Family Practice, Volume 30, Issue 2, April 2013, Pages 233–241, <https://doi.org/10.1093/fampra/cms054>

Published: 16 September 2012

JACC: CARDIOVASCULAR IMAGING
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PUBLISHED BY ELSEVIER INC.

VOL. 8, NO. 6, 2015
ISSN 1936-878X/\$36.00
<http://dx.doi.org/10.1016/j.jcmg.2015.02.014>

Ethnic-Specific Normative Reference Values for Echocardiographic LA and LV Size, LV Mass, and Systolic Function

The EchoNoRMAL Study



The EchoNoRMAL (Echocardiographic Normal Ranges Meta-Analysis of the Left Heart) Collaboration*



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Acknowledgements



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We are grateful to all the subjects; practice staff including receptionists, nurses, managers, and general practitioners for taking part in this study.

Data collection: Krishna Lalukota, Manas Karpha, Sophia Rowe, Olena Dotsenko, Abdalla Alzuwam, Raja Wajahat, Alena Shantsila, Harshida Patel, Phil Bennett, Sabina Yasin.

Research secretary: Jaskiran Dhonsi, Abdul Khalade.

Database development/management: Aparna Shankar, Helen Duffy.

General Practice Centres: Rotton Park Medical Centre, City Road Medical Practice, Cavendish Medical Practice, Ann Jones Family Health Centre, Shanklin House Surgery, Burbury Street Surgery, Heathford Group Practice, Broadway Health Centre, Victoria Road Medical Centre, Churchill Medical Centre, St Clements Surgery, Handsworth Medical Centre, Soho Health Centre, Church Road Surgery, Bloomsbury Health Centre, Al-Shafa Medical Practice, Enki Medical Practice, Aston Pride Health Centre, Newtown Health Centre, Hockley Medical Centre