BRITISH MEDICAL JOURNAL VOLUME 290 29 JUNE 1985

### 949

# PRACTICE OBSERVED

# Practice Research

# Use of a questionnaire in general practice to increase the recognition of patients with excessive alcohol consumption

PAUL WALLACE, ANDREW HAINES

### Abstract

A self administred questionnaire, the health survey questionnaire was designed to detect excessive alcohol consumption and mailed to patients who were registered with two general practices. Replies were received from 2572 (75%) of 3452 patients. Excessive consumption was taken as 42 units of alcohol per week or more for womes. I unit-approximately 10 gethanol and is equivalent to a half pint of the conseguence of the control of the contr

Within 22 months after the questionnaire survey three groups of respondent were reviewed: (a) the excessive draikers, (b) those who indicated concern about drinking but did not exceed the limits for excessive consumption, and (c) a random sample of those who were in seither of these two categories. Patients in these three groups were interviewed in a standard fashion to determine their alcohol consumption. Breath alcohol measurment was also carried out and a blood samble than for the

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estimation of mean cell volume, y glutamyltranspeptidase activity,

There were highly significant correlations between estimate of consumption obtained by the questionnaire and those obtained at interview except among the women who were excessive consumers, whose responses to the questionnaire indicates levels of consumption that were much higher than those to which level and the statement of the excessive distribution at interview that was above the limits set for the study was used as the standard measure for comparing the questionnaire and excessive consumers than any of the blood tests. Among considerably greater estimated essentivity in detecting analexactions are also as the excessive consumers than any of the blood tests. Among the women it appeared performed less well, although the numbers would be considerably greater estimated see seed, although the numbers of the excessive consumers than any of the blood tests. Among the statement of the excessive consumers was positive in only a few of the excessive consumers was positive in only a few of the excessive consumers was positive in only a few of the excessive consumers was positive in only a few of the excessive consumers was positive in only a few of the excessive consumers was positive in only a few of the excessive consumers was positive in only a few of the excessive consumers was positive in only a few of the excessive consumers was positive in only a few of the excessive consumers was positive in only a few of the excessive consumers where the excessive consumers was positive in only a few of the excessive consumers where the excessive consumers was positive in our properties.

The use of this simple and inexpensive instrument is likely to prove widely acceptable to patients in general practice and should result in a considerable increase in the recognition by general practitioners of patients with excessive alcohol consump-

### Introduction

Alcobol consumption has been rising since the second world war in the United Kingdom and many other countries' at least until the late 1970s) and has been accompanied by a parallel increase in associate morbidity and mortality. 'It has been suggested that preventive measures should be taken to halt this trend. 'General practitioner are well placed to take preventive action as they generally see some 70% of their patients each year and at least 90% over a three year period, but there is ordence that they may fail to detect many of the excessive drinkers in their care. 'This may be due not only to lack o skills in early detection but also to the limited sensitivity an

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specificity of the laboratory tests that are traditionally used in clinical practice for this. Standard interviews and questionnaire have identified more excessive drinkers than laboratory tests in hospital patients, but little is known about their usefulness in research practice.

### Patients and methods

Data on the alcohol consumption and levels of concern about dranking were obtained with the health survey questionnaire, as if deadmantered questionnaire that we developed to use in general pressure. This includes a paper of health-n-manely, eigenvie to underly expert of health-n-manely, eigenvie to underly every developed, and physical exercise. These were included to obtain useful additional information and because there is evelente that a quiested operation may result on an able to the expert of the eveloped of the every section contains underly choice format is used throughout, and every section contains unquiestiff experts of the every section contains expert of the eveloped of the every section contains quantity frequency scales. For alcohol the questionnaire asks the average frequency were contained on each cease. The weekly consumption is calculated as the product of these two values. For the study consumption by men of 42 mins a week or more than the contains a more than one of the work of the contains a contain a more than one of the work of the contains a contains a contains a contain the contains a contain a contain

The second section is based on the Cage interview for the detection of concern about orithang er-ordinenc of drinking problems." In the questionnaire the four Cage questions are modified to relate not only to alcohol but also to the three other aspects of health. Four options—"never," "most offers" and "very often" and "very often"—replace the original yet on responses. Any response other han "never" is retracted as postures [a keeping with the more of the questions are classified as Cage posture. In keeping with the more of the questions are classified as Cage posture. In the final section patients are asked to state whether by their own assessment they have a problem in any of the four supers. Those who answer "definitely" or "possibly" to the questions on alcohol are decignated self assessed problem.

The study population comprised all the patients aged 17-70 on the age-sex registers of two practices in a health centre that is situated on a council

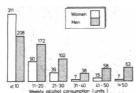


FIG 1 — Weekly alcohol consumption of regular drinkers

bousing estate in Harlesdee, north west London. Patients were mailed a copy of the questionnaire, which was accompanied by a covering letter that was signed by their general practitioners and a prepaid envelope. Nonrespondents received remained letters at three weeks and its weeks, and the records of perstatent non-respondents were tagged to that they could be banded a copy of the questionnaire when they attended surgery. The returned forms were coded and double checked before being seat for

After the questionnaire survey a sample of the prisents who had returned a completed questionnaire within air months of the original mailing was invited to attend for an interview. breath advoid measurement, and researched for the containts of means of downer, "planning/invaperpoise, activity," and formit apparate transationnee excitor; This included all the control of the contr

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whose responses indicated neither excessive consumption nor concern about their drinking was also invited to attend.

The artists response intentional (months but not a first intention of the content o

The patients were interovered (mostly by one of two interoverers) about here lifestyle and general health. A systematic history of their alcohol consumption in the previous week was taken, and they then underwent in horif physical examination during which measurement of breath alcohol was carried out with a Lion Akcolmeter. Finally, the venescenion was performed. The companisons between the interview and other measurer of excessive consumption were based on the results from those patients who were seen within 12 months of completing the original questionnaire. In over of the state of the patients of the patients of the patients who were seen within 12 months of completing the original questionnaire. In over of the state of the patients of the patients of the patients when the state of the patients of the patients of the state of the patients of the patients of the state of state of state of state state

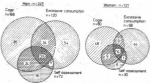


FIG 2—Positive responders to health survey questionnaire. Cage  $\times$  Cage interview to detect concern about drinking or evidence of drinking problems.  $^{11}$ 

median values and ranges are given in the tables. Widcoxon's test an Spearman's rank correlation coefficient were used to compare the median and the intercorrelations between the measurements respectively, while the  $\chi^2$  test was used to compare the proportions of patients in different categories. The small difference in the number of observations available comparison of the laboratory and interview data are due to some incomplet boost samples.

### Results

### QUESTIONNAIRE SURVE

on the two preducts, 359 Basis (note of contagon describes, as studented by population whome deficiency were appointed yearset; 2379 questionations we prediction whome devictionations compared with 1119 (70%) of the 1859 mecens, 147 (75%) returned a questionnative compared with 1119 (70%) of the 1859 in (7±27.8; p.c-9.001). As described in an earlier paper the response rate we hapter among the older age groups. Two bundered and rowers three ms (20%) and 557 women (37%) defined having drunk alcohol at all in the thir and 359 women (27%) defined having drunk alcohol at all in the first drunk a day per week. The state that they had been drinking only consciousal Allogether, 641 mec (37%) admitted to regular drinking (at least of drunks a day per week. 289 (26%) in draw along to one or two days a week and 313.7% indirange every day. Grabb (arbitration of the control of the control

One hundred and twenty men (11%) and 68 women (5%) were skentlike by their response to the questionnaire as excessive consumer. There were no important trends by age for either set. In the one practice where a disease register was key II against had been recovered on heavy dimarks before the register was key II against had been recovered on heavy dimarks before the them are also also as the set of the se

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COMPARISON OF RESPONSE TO QUESTIONNAIRE WITH STANDARD IN BREATH ALCOHOL MEASUREMENT, AND BLOOD TESTS

Completed questionnaires were returned by 2477 patients within as months of the original maining. Of thee, 349 patients were classified a positive responders and were airwired to attend for interview and blood tests. Thirrees had died of changed address in the intervening period and, of the remander, 203 :60% attended within 12 months of the original maining the test attendance are was sumilar among the random sample of patients when the contractive of the result of the patients when the contractive of the patients are the contractive of the patients and the contractive of the patients and the contractive of the patients and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, 391, and 43 years respectively for the men and 443, and an admitted the second and a second and

Significant correlations were found within all groups except the female excessive consumers in whom the median value obtained at interview was

nger in the controls than in the heavier drinkers. The laboratory cators of excessive consumption were raised above the limits of normal in

only small proportions (less than 40% in all cases) of the patients in the questionaire excessive consumption and concern only categories, whereas up to 16% of the controls had results above the normal range (table II). A similar pattern was evident for patients who were classified as excessive consumers (more their interview (table III).

The estimated sensitivity and specificity of the questionnaire and laboratory rests were calculated using excessive consumption at interview the standard measure. The cut off points for the laboratory tests were the same as those shown in tables! If and III. For the questionnaire both excessive consumption and concern only were taken as positive responses. To obtain estimates of the emistivity and specificity of the differen measures in the whole population the findings in the sample who attende the interview and blood lests were weighted according to the proportion or

patients in each questionnaire category who attended (table IV.).

For the men the questionnaire had considerably higher sensitivity that
any of the tests and comparable specificity. For the women, of whom th
numbers who admitted to excessive consumption at interview were small

BLE I Reported weekly	omsumptum at interesen	by questionnaire category

Questionaire categorie	No in category	Median consumption in units week range	Median interview on sumption in units week range	Spearman correlation coefficient	Excessive consumption of interview
		,	Men		
Lucyan		F7.0	42.0	D-37	N 1 00 0 00111
consumption	62	42-196	n-210	c- 0 gus	er i to manis
Lamerra		15.0	16.11	0.48	
rents	71	0.45	0.91	p- 0 0001	20 P 0 0011
Controls	194	4.5	6.0	0.66	6
		B-45	W-76	p- 0 0001	4
Europe		29-1	× 0	0-02	4 1 0: 0 051
MONUMENT	- 0	21-112	W-1 st	85	14 L. 0.0-1
Compare		4.5	* 0	0.51	2 1
1996	OK.	0.18	11-46	p- 0 005	\$. NM
Lamenda	117	7.5	1.0	0.52	, '
		0.16	0.25	e- 0-0001	2

\*Men. 42 units a week or more, women. 21 units a week or more fComparous with proportion of excessive drafters in control group.

TABLE 11 - Comparison of luboratory tests and responses to questionnan

		Moan	cell solume			Glutany	prem-behavior	r		Serum aspuriate	transamina	r-c
Questionnaire categors	No in	Median fl range	Raned 92 ft "	Comparison with controls*	No. m category	Median IU I	Karedt ~	Camparison with controls*	Norm	Median IU I	Rancol 30 JU 1	Comparison with controls
						Mex						
Exercise	14	92.0	22	c- 0-001	Sx.	17.5	14	p- 0.005	u	24.9	14	88
CONTRACTOR		N2-105	37.	,		6-46K	24			11.86	26	
Concern	**	89 U	17	88	Mb.	16.0	15	NS.	56	21.9	- 5	N.
emby		79-100	26			6.83	21			14.59		
Controls	184	NN ()	22		18.	14.0	10		181	22 0	29	
		69-111	is			5.500				7 127	16	
						Company Company						
Excur	24	71.0		p. 0.025	41	10.0		NN.	10	18	0	No.
consumption		NV-101				4.19	11.			K-29		
Concern		90.0		p 0 05	41	11.0		NN.	**	18	- 1	
ents.		79.100	25			4.46	-18			9.42		NS
Controls	109	EX O	17		110	× 0	4		105	18	6	
		65.97	te.			2.92	×			5.48	6	

\*Wilconom's test †Men +2X IU I; women +1X IU I

TABLE III—Comparison of laboratory tests with reported consumption at outertrete

			cell volume			; Glutamy	il rampete his	r		Scrum aspertate	transamina	~
Consumption at interview units week	Nous	Median fi	Ranged 92 ft	Comparison*	No an category	Median IU I	Randt 5	Companyon*	Near	Median: IU 1	Raned 10 IU I	Companion
						Mar.						
~42	49	92.0	20		51	19.0	14		50	24:0	15	
		(#5-305)	41	p- 0 001		7-580	-27	p- 0 001		13-177	(a)	p- 0.01
- 42	259	3X 0	46			14 0	ių.			22.0	33	
		69.111	18		255	5141	ű.		241	7.86	14	
						II comes						
-21		90.5	1		*	11.5	,		7	21.0	0	
	-	79-101	ta.	NS		6-19	25.	NS		13-19	-	NS
(2)	165	X9 0	- 11		100	8.5	11		161	18.0	2	
	,	65-100	19			-2.92	10			5-48	4	

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the most sensitive of the laboratory tests for both men and women. The yguitum/transpeptidus activity, though more specific than the mean cell volume, was considerably less sensitive, while serium apparate transammans activity, though comparable mensionarity and specificity to the y-glutamytranspeptiduse activity, for the men, failed to detect any of the female excessive consumers. Positive breath alsohol readings were obtained from only 11 (8%) men and one (1%) woman in the questionnaire accessive of the constraint of the control of the control of the control of the C2% of the men and one (1%) woman in the questionnaire group in

TABLE IV—Estimated sens naire, mean cell volume, 7 s aspartate transaminase, tris	haamilteanspej k excessive cons	endase, and serum
them as the standard measu	···	•
	Sensitivity 5	Specificity 15
	Mon	
Questionnered	77	×4
Mean cell volume	42	M4

\*42 units a week or more for men. 21 units a week or more nomen.

### Discussion

The health survey questionnaire seems to be both acceptable and intelligible even to a relatively deprived urban population as judged by the high rates of response and satisfactory completion. Indeed, the true response rates may have been higher than indicated by our calculations because of the probable underestimation of the numbers of those who changed address without the knowledge of the metrics. \*\*

The principle theoretical disadvantages of such an instrument are the possibility of misinterpretation or misrecording inherent in any self administered questionnaire and its reliance on an estimated weekly consumption that may fail to detect bings drinkers. The accuracy of this estimate also may have been reduced by the failure to use separate quantity/frequency scales for beer, wme, and spirits, although increasing the complexity of the scale might have resulted in a greater potential for error in completion. None the less, the findings are similar to those of several previous community studies, both in the overall patterns of consumption and in the prepondenance of excessive dininkers among men. ""The proportions of abstinaers were higher than those found in other studies, perhaps due in part to the fact that the questionnaire asked about drinking in the previous three months rather than in the past year, but it is also possible that

The cut off joins that we used to define accessive dishiking is.

The cut off joins that we used to define accessive dishiking is.

Note the less, there is much tridence to suggest that they are appropriate for primary pervention. The results of a study of male civil servants indicated that mortality may increase at levels of consumption in excess of 35 g and yet? As units a weekly, "while the results of a case-control study in France showed that the risk of circular to the control of the control

A total of 168 patients, 11% of the men and 5% of the women, noticated excessive alcohol consumption on their questionnaire. In the one practice where a disease register had been kept 74 of these had not apparently been recognised as heavy drinkers by their general practitioners. Despite the considerable increase in recognition restuling from the questionnaire it is likely that our figures RITISH MEDICAL JOURNAL VOLUME 290 29 JUNE 198

underestimate the true extent of excessive drinking because of the possible overrepresentation of heavy drinkers among the non-responders. Though the overlap between excessive consumption and positive response to the Cage and self assessment section was considerable, a substantial proportion of patients was classified in the concern only category. This finding may have been due to several factors. Some of the patients may genuinely have an average weekly consumption below the limits set for the study but may have been concerned because of occasional burge drinking. Others may have been concerned because of a family history of drinking problems or the belief that even small quantities of alcohol can be harmful. Twenty per cent of the men in this category, however, who attended for interview subsequently admitted to excessive consumpting, and this suggests that the door their previous week's furnishing, and this suggests that does not be previous supplement to the quantity/frequency scale in improving the detection of execusive consumer.

A comparison of the estimates of weekly alcohol consumption obtained by the questionnaire with the previous week's consumption as stated at interview showed generally good agreement between these measures. Indeed, this may have been underestimated both because of the lapse of up to 12 months between completion of the questionnaire and attendance for interview and because the previous week's alcohol consumption may not have been byte-incorrectives and the state of the s

Calculation of sensitivity and specificity is difficult because of the subnece of a "gold standar" for the estimation of excessive alcohol consumption, but a detailed previous week's drinking history is generally regarded as the most reliable measure. The system of weighting used in calculating the estimates of sensitivity and sepceificity is based on the assumption that the sample of patients in each of the categories who attended for interview were representative of the patients in these categories in the study population as a whole. Since it is impossible to be certain that this was indeed the case these estimates should be treated with some caution. Now the less, for the men the questionnaire seems to be much more sensitive in the many off the other measures, and its specificity was comparable. Although it appeared to perform less well for the women, few were classified at interview are accessive dimners. We have discussed the possibility that the interview may sersously underestimate the actual numbers of women who drink excessively, and the true sensitivity that the interview may sersously underestimate the actual numbers of women who drink excessively, and the true sensitivity the estimation of the summer of the case of the contraction of the contraction of the sensitivity of the contraction of t

The sensitivity of seems do yeard man under the sensitivity of seems do yeard yeard

Our results indicated that the health survey questionnaire can be used in general practice to increase substantially the recognition of patients with excessive alcohol consumption. In men it works considerably better than the blood tests traditionally used for this purpose, although its performance in the case of women requires further evaluation. By distributing the questionnaire to patients strengthment of the properties of the patients of the strengthment of the patients.

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minimum. The general practitioner could use part of the consultation time to take a more detailed drinking history in those with positive responses to the questionnaire, in intervening where appropriate with advice to reduce consumption. Evaluation of the effectiveness of such intervenion should now be carried out, preferably by means of a randomised controlled trial.

A TRADOMINES CONTINUED THAIL

We thank the Xir Jules Thorn Charitable Truss and the Royal College of
General Practitioners for the award of the Research Fellowship in General
Practice, our colleges De Bowman, Gellert, and Teutine for their kind
cooperation. Angels Booverfl, Dr Richard Budgert, Eva Goldenberg, Danuta
Lowday, Paula Morgan, and Jane Storde for help in carrying out the study.

Becman, and Douglis Jones for help with the data analysis, Jane Wedoweth
and Justin Danundo for understaing statistical analyses. Th High Markouse
for helpful comments: Professor T Whitehead for understaings bechemical
analyses; and the Department of Hearmistogy, Northwick Park Hospital
for the measurements of ment corpus. ular volume. We gratefully acknowledge financial support for the tudy by the Theverts Southern.

1 Other of Health Economics: Market reducing the huma. Lutter: White Crescent, 1981.

and allowing a sourchage meet. Journ 1982 5 199-53.

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### Study of middle ear disease using tympanometry in general practice

RANDALL REVES, RICHARD BUDGETT, DAVID MILLER, JANE WADSWORTH, ANDREW HAINES

Abstract
Tympanometry was used to provide evidence of middle ear effusions in a prospective study of middle ear disease in 264 children aged 3 months to 6 years in general practice. Adequate measurements on both ears were obtained in 220 children, of whom 68 (31%) had evidence of middle ear effusion in one ear (27 children) or both ears (37 children) at entry to the study, In 23 (42%) of the 68 children persistence of the tympanometric description of the control of t

of effusion by tympanometry with that by pneumatic otoscopy showed that using the appearance of the cardrum alone the sensitivity of otoscopy was 55%; the addition of mobility improved the sensitivity to 76% with little reduction in specificity. Further studies on populations using tympanometry are needed to determine the natural history, actiology, and indica-tions for referring children with middle car effusion.

Introduction

Middle ear effusion is a common cause of hearing impairment in children but may be undetected by otoscopic examination. "For epidemological purposes audiometry alone seems to be inadequate for the detection of middle ear dissess since a proportion of children with an effusion have no evidence of clinically relevant hearing loss." The use of tympanometry in addition to audiometry in screening programmes in schools has been proposed, with repeat testing programmes in schools has been proposed, with repeat testing programmes in schools has been proposed, with repeat testing abnormal tympanograms. There is concern that some children with chronic effusions but normal hearing may remain otherwise undetected until they present later in life with treversible middle ear disease and mastoid complications. The results of a recent study in London's uggest that 20% of 5 to 6 year old children may need referral because of persistently abnormal tympanograms. Even in those children in whom defineess is associated with effusion parents losses may lead to delay in speech and cognitive development."

Although a persistent effusion may follow an epitode of otitis media, many children with middle ear effusion have no such history. Community studies of children pounger than 5 years with tympanometry have been undertaken in other countries, such as Demark, but apparently not in the United Kingdon ma'valence of programment, and the programment of the programment of the countries and the factors associated with tympanometric evidence of middle ear

REITISH MEDICAL, POURNAL. VOLUME 290. 29 JUNE 1985 effusion: 16 (23%) of 71 compared with 49 (38%) of  $130(\chi^2+45, p=0.05)$ . The prevolence of a type B lympanogram in one or both care was 17 (26%) in the prevolence of a type B lympanogram in one or both care with 17 (26%) in the prevolence of a type B lympanogram in one or both care with 17 (26%) in the shallow plant in the prevolence of the prevol

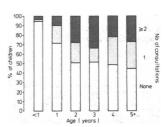


TABLE IV.—Association of previous history of onlis metha and lympu tivith subsequent consultation for ones media during follow up period

	Previo	us consultations for entit	s media
I vmpuovgram dasuk aven	Nonet	*1	Total
AA	255.4	6.28 (21)	E/E3 : 10:
AvC	2 19 5	11 30:37:	13/69 (19:
в•	4 36 11	13.32:41:	17:68 (25)
Total	8 (30 · 6 ·	30 90 - 33 -	38 229 17:

Classified by the worst car of each chief. 39 of sh' children cleasible as 8 had bins transparent and processing who consideral for active costs media in the follow up personal processing who consideral for active costs media in the follow up personal proposed consolidation. p<sup>2</sup> = 25 s, pr. 0.001

Effect of preprints consolidation. p<sup>2</sup> = 25 s, pr. 0.001

previous history: 33% of those with a positive history subsequently consulted for acute outsin media. This was pronounced among children aged over 3 years; all bottom of the 12 consultations for outsin media during follow up were with children who had had a previous diagnosted episode.

At least once repeti ryinganegam was obtained on 181 key flow up were with children who had be a solid to the 200 key was less complete in those with a balateral type A than in those with type AAC or B, reflecting the greater emphasis placed on follow up of abnormal results. Table V gives the results of the last follow up ryinganegam by the initial typinganegam type classified according to the child's versi et. Off children who had type B initially, 35 (5%) i remained type B it follow up, and in 28 (4%) follow up was togget than there month. The children with type A in follow up, and in 28 (4%) follow up was togget than there month. The children with type A togget than there month. The children with type A togget than there month. The children with type A togget than there month. The children with type A togget than there month. The children with type A togget than there month. The children with type A togget than there month. The children with type A togget than there month. The children with type A togget than there month. The children with type A togget than there month.

Initial tympanogram type		No. S.	No mean; of visits after	Final typ	penograd	iype 🔨
(worst car)	No	followed up	metal examination	В	AsC.	۸
8	44	64:94	186 2.91	85-55)	19 (30)	10 (16)
As/C	69	57 (83)	131 (2:3)	11.19	23 (40)	23:40
Α	23	60 (72)	91 (1.5)	#:13:	14 (23)	38 (65)
Total	220	181:82)	40x · 2 3:	54 . 301	56:31:	71:39

Discussion

The prevalence of middle ear effusion as shown by tympanometry in a prospective community study in Denmark was approximately 20% of 3 year old children, the effusion persisting for three months in only 6% of the whole population. In our study, over a troader interest of the control of the cont

varying degrees of estataman tude dystanction or resolving muid, or both the study of middle and disease is complicated because there seem to be several diagnostic entities—soure oritis media, recurrent oritis media, and persistent oritis media with or without super-imposed acute oritis media." The ability to detect middle ear effusion is a critical determinant in any study of the incidence, prevalence, natural history, and response to treatment of these conditions. The differences in age specific incidence that were described in studies in Finland and Demmark, in which the highest incidence was in children under 2, and the 1957 Medical Research

## 1954

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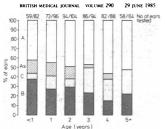
Methods

The ruly west, carried our in a general precision at a both centre in overhower London that is intuned on a council bouring estime and errors a deprived population. Using the age-sex register, we destinded all 29's children aged 3 months to sware on 31 October 1983 and sent letters to the parents ceptioning the voluy and requesting attendance at the health of the parents ceptioning the voluy and requesting attendance at the health of the council of the parents ceptioning the volume of the council of the parents ceptioning the council of the parents ception and the parents white, and the child, the number of whitney, the mother's capacite smoking, and a history of atops have feet of white, when the council of the council of

Type	1 vmpunographic findings	Pathological associations (11)
٨	Normal pressure, normal compliance (peak at normal pressure)	Vers small propurties - PS: have
A٠	Normal pressure, low compliance small peak at normal pressure.	Variable proportion #75%

s compliance and middle can pressure
100 mm H-2) or indeterminate
avoid fit or peak below 100 mm H-2);
gative pressure, mornal compliance i peak at
thi-33% associated with officialn

A total of 452 ears in 232 children were successfully tested by tympanometry in 12 children only one ear was uccessfully tested. In children under 2 vears 74% of ears were successfully tested by tympanometry compared with 91% in those over 2 years. Figure 1 shows the proportion of tympanogram types by age for the 452 ears. Type B tympanograms were



most common in children under 1 year (37%). Overall, the proportion of ears with type B was higher in those under 3 compared with children aged 3 and over; 31% or (24 e 20% of 226, ½ e 26, e 20 de 32). The proportion of type As declined at older ages, whereas the proportion of type C tympanograms increased.

ottocopy were compared with tympamometry for the 86c ears that had bad complete ottocopy examinations and tympamometry. This comparison excluded the ears without adequate visualisation of the tympamic membrane (n=63) and the surf for which mobility was not terred by pneumatic membrane (n=64) and the surf for which mobility was not terred by pneumatic surface and the surface of t

	Normal	Reduced or absent mobiles	Total
Normal appearance	20 264 8	18:40:45	33-304 : 13 :
Abnormal appearance	2.7:29:	45-55(82)	47/62 : 76:
Total	22 271 (8)	63/95:661	85'366 (23)

TABLE III—Comparison of the appearance of the tympanic membrane atoms with the appearance plus mobility in identifying ears with type B tympanograms (percentages in parentheses)

	Appearance alone*	Appearance and mobility†
Sensitivity1	47-85 (55)	65 85 (76)
Specificaty	266 281 95	244-281 (87)
False positives	15/62 24:	37 102 36:
Fabr negatives	38/304 (12)	20/264 (\$1

Council study in the United Kingdom in which the peak annual incidence was around 6 years of age may reflect differing diagnostic moderness of the peak annual incidence was around 6 years of age may reflect differing diagnostic children with recent respiratory infections or outlage may pick up some persistent effusions, but many will remain undetected as they are present in children without such a history.

The use of the tympanometer is acceptable to patients and easy to learn, but a comprehensive community screening programme does not seem to be indicated until further information is available, practices and its effect on child development and the probability of developing irreversible middle ear disease. Tympanometry can never replace audiometry as a screening instrument because it will not detect neurosensory deafness. Until the role of tympanometry in eneral practice is clarified it seems resonable for general practicus outs est clarified it seems resonable for general practicus outs in clarified its seems resonable for general practicus outs with the consequent improvement in detecting middle ear effusion.

We thank jacks Bennett, Janet Striste, and Shela Forman for clerical

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### 100 YEARS AGO

The conference between the Subcommittee for Medicane of the Executive Committee of the Association for promoting a teaching University for London, and representatives of the Medical Schools on London, was commenced on Monday list; at the rooms of the Society of Arts. An ordine exception of the Conference of Monday list; at the rooms of the Society of Arts. An ordine exception of the Conference of Monday list; at the rooms of the Society of Arts. An ordine the Submitteet, this plan, the substance of which has laready between most public on more than one occasion, provided that the University should be founded on faculties at constituent bodies, which Based of studies appointed by the proposed that the Faculty of Medicine thould consist of the teachers and reasumarys in London, and the persons present, being all teachers, anternally associated, further, it was thought that only the senior teachers should be admirted, and that the younger men, be associated, the studies of Studies which would regulate the curriculum, the examinations, and all other nations to deprese the studies of the s

Acker—This fruit is a delicesty in Jamaica and is used in "bush tea." The ripe fruit can be eaten after a meal without ill effects, but if it is unarper it may be possiones. It may cause hyperglyceman due to row factors hypoglycin A and hypoglycin B. This may result in womining (Jamaican womining schemes), land and the properties of the properties of the properties of the landars who live in the Unterde Kingdom have come from Jamaica. They often go home on holidary and bring tunned ackee back with them, which may contain nump fertil.

Ginger heasors—Perserved ginger root is a popular Chinese stack and, if it is not chewed properly or is eaten an a hurry, can cause small bowel obstruction at the ideoxecal junction. The ginger root consists of cellulose, which is resistant to gastric junces, absorbs water, and swells up during transit-through the gui. An delerly Chinese dult patient or a child may complain of pain in the right late foots. This must be considered in the differential diagnoses of acute abdomen.