Birmingham and Solihull NHS
Mental Health NHS Foundation Trust

Evaluation of prescribing of oral vitamin supplementation in homeless patients with alcohol dependence

Audit ID	763	
Programme/zone	Addictions & The Homeless	
Teams	Homeless Primary Care Team	
Audit Type	Initial audit	Local audit
Project start date	01/04/2014	
Project completion date	01/11/2015	

Introduction:

Audit Brief description:

This audit will look retrospectively through records of patients registered at the Homeless Primary Care Service over a six month period (1/04/14 - 30/09/14) who are recorded as having alcohol dependence syndrome, alcohol problem drinking or alcoholism. It will look at whether the recommended guidelines around the prescribing of oral vitamin supplementation are being followed within the service and to what extent.

Background to the Audit

In the developed world chronic alcohol dependency is seen as the commonest cause of thiamine deficiency (Sgouros et al 2004) and has been reported in 30 – 80% of alcoholics (Cook et al 1998). Chronic alcohol use can lead to deficiency in vitamin B and thiamine through a number of contributing factors – such as poor nutritional intake, interference with the absorption of vitamins from the gut, impact of liver disease on storage of thiamine (Thomson et al 1983). It is understood that deficiency can potentially lead to the development of Wernicke Korsakoff's Syndrome (WKS) (Martin et al 2003). This is a potentially disabling or life-threatening disease which can result in permanent short term memory problems (Thomson and Marshall 2005). If left untreated Wernicke's Encephalopathy can lead to death in 17 – 20% of cases, with 85% of survivors developing Korsakoff's Psychosis (Thomson and Cook 1997). It is understood that vitamin B and thiamine are essential in the metabolism of glucose in the brain and subsequently a deficiency of these may impact on the brain's 'access' to the energy it derives from glucose and subsequently damage occurs (Cook et al 1998).

Rates of alcohol misuse are higher amongst the homeless population than the general population, with 27% of homeless individuals reporting having or recovering from an alcohol problem (Homeless Link 2014), compared to 8.7% men and 3.3% of women reporting alcohol dependence in the general population (Health and Social Care Information Centre 2014). Addiction issues may impact on nutrition in a variety of ways, for example through individuals choosing to spend money on alcohol/substances rather than food (Wright 2002), or through decreased appetite, gastric problems or regular vomiting.

Homelessness can impact on an individual's nutritional intake in a number of ways – for example - lack of money to buy food, limited food choices which may be of poor nutritional value (from food provided via hostels or drop-in centres or 'soup runs') or lack of storage facilities for food (Johnson and McCool 2003; Wiecha et al 1991). This may contribute to an increased risk of deficiency in vitamin B and thiamine through poor nutritional intake of the vitamin in addition to the mechanism of alcohol affecting utilization/access to vitamin B and thiamine. Subsequently the individuals seen within the Homeless Primary Care Service are potentially at increased risk of WKS and this necessitates vigilance around adherence to guidelines around oral supplementation of vitamins.

References

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Thomson, A.D., Ryle, P.R. and Shaw, G.K. (1983) Ethanol, Thiamine and Brain Damage. Alcohol and Alcoholism 18 (1), pp. 27-43.

Wiecha. J.L., Dwyer, J.T. and Dunn-Stohecker, M. (1991) Nutrition and Health Services Needs Among the Homeless. Public Health Reports 106(4), pp. 364-374.

Wright, N. (2002) Homelessness: A Primary Care Response. RCGP: London.

Audit Aims/objectives:

To establish whether patients are being offered and prescribed vitamin supplements to recommended standards/guidelines.

Patient and public involvement in this clinical audit project:

How this audit will benefit patient care:

Vitamin supplementation in those who are drinking alcohol problematically is recommended in national guidelines. This audit aims to establish whether current practice meets recommendations or whether changes in practice need to be instigated.

Level of service users involvement in this audit project:

There were no service user involvement in this project.

Standards:

Standards	Target	Standards Reference:
Recommended prescribing in BNF	Thiamine: mild deficiency – 25 – 100mg daily; severe deficiency – 200 – 300mg daily in divided doses. Vitamin B Compound Strong tablets: 1 – 2 tablets three times daily.	British National Formulary
NICE CG100 - Alcohol use disorders: diagnosis and clinical management of alcohol-related physical complications	'Thiamine should be given in doses towards the upper end of the British National Formulary range'.	NICE Alcohol use disorders - physical complications (NCG100)
Birmingham and Solihull Mental Health Foundation Trust guidelines around clinical management of harmful alcohol use/dependence	"Offer prophylactic oral thiamine to harmful or dependent drinkers: - if they are malnourished or at risk of malnourishment or - if they have decompensated liver disease or - if they are in acute withdrawal or - before and during a planned medically assisted alcohol withdrawal. "	Birmingham and Solihull Mental Health Foundation Trust BSMHFT – Clinical Management of Harmful Alcohol Use and Dependence

Method:

Audit methodology	Retrospective
Data sources	Case note review
Sampling Method	Systematic sampling
Population size	Alcohol dependent homeless patients
Sample size	152
Data collection for the period of	01/04/2014 to 30/09/2014

This audit was conducted by a Community Alcohol Nurse within the Homeless Primary Care Service. The sample was drawn from the entire list of registered patients of the service. A search was performed of those patients recorded as having a diagnosis of 'alcohol dependence syndrome', 'alcohol problem drinking' or 'alcoholism'. 152 individuals were noted to have at least one of these diagnoses recorded between the period of 1st April 2014 to 30th September 2014. Once these individuals were identified records were gone through manually checking whether (a) they had been offered vitamin supplementation and (b) whether they had been prescribed vitamins.

Results:

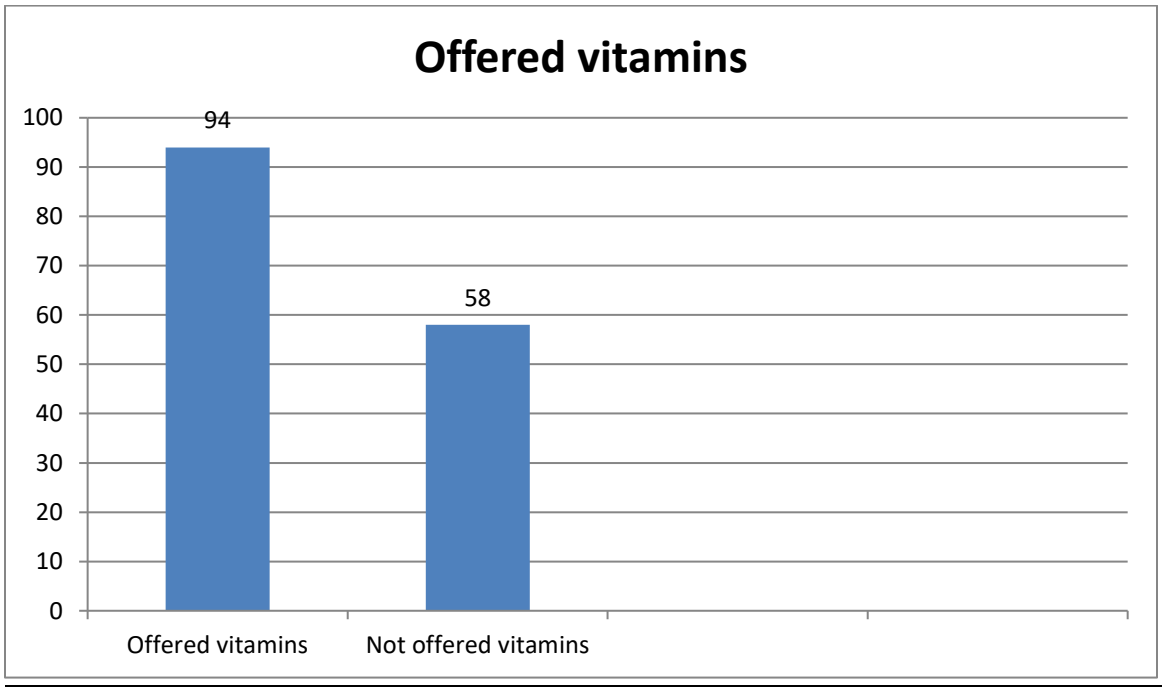

Figure 1: Service users offered oral vitamin supplementation

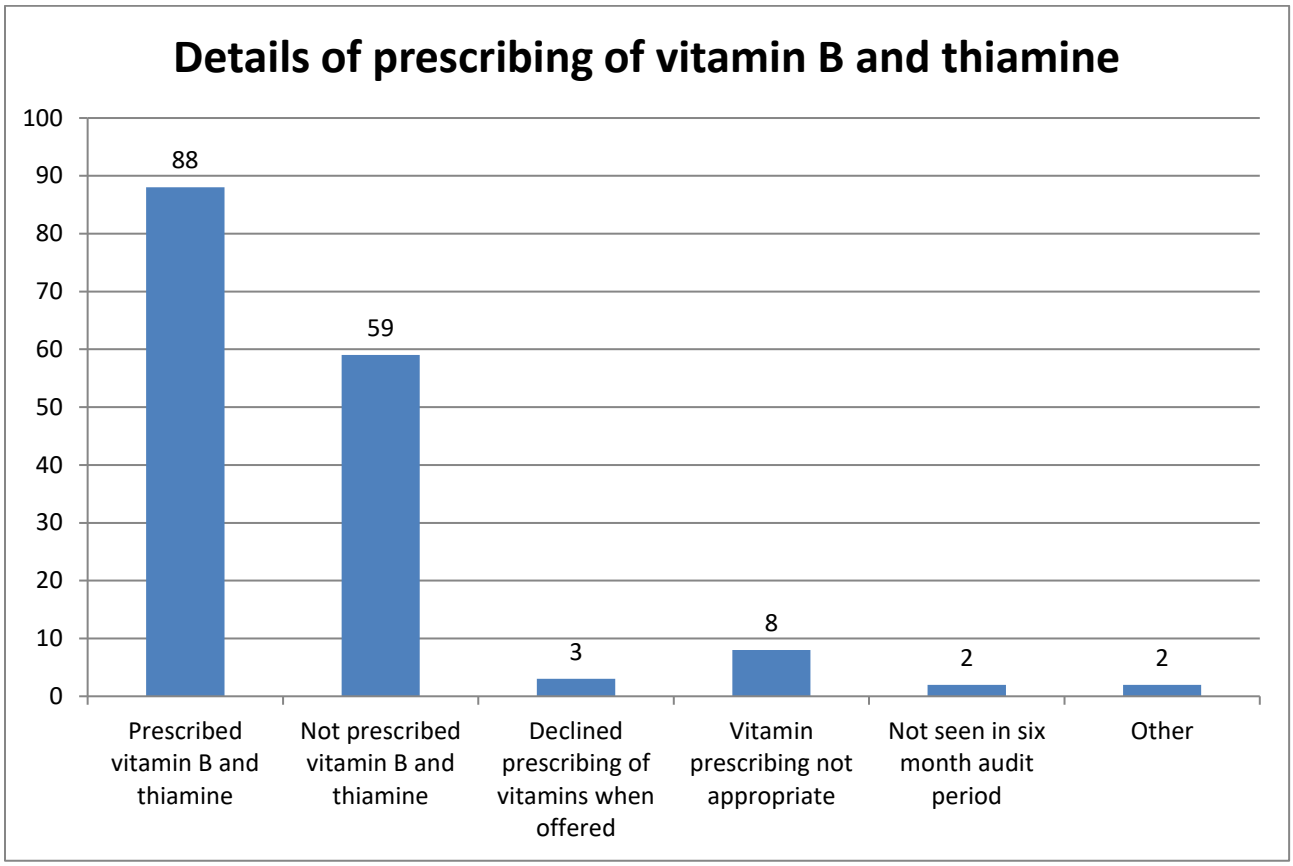

Figure 2: Service users prescribed vitamin B and thiamine

Conclusions:

There are established guidelines around the prescribing of oral vitamins in those who are drinking alcohol problematically. The results of this audit demonstrate that a significant number of service users audited through this period were not offered vitamins (around 35%). Additionally of those audited a significant number were not prescribed vitamins (around 35%) with a very small number (N = 3) declining vitamin prescribing when offered.

Key findings/risks:

1. There was no documentation around a significant number of service users being offered vitamins.
2. A significant number of service users were not prescribed oral vitamins contrary to recommendations in established guidelines with the potential to increase risk of WKS.

Recommendations:

1. Present audit amongst Homeless Primary Care Service.
2. Formulate plan to improve the prescribing of oral vitamin supplementation following recommendations in established guidelines.
3. Encourage all clinicians to document when vitamins are offered and/or declined by patients.
4. Audit to be repeated in 6 months time in order to assess team progress.
5. Present audit to non-medical prescribers' supervision meeting.

Action Plan:

Is re-audit necessary? Yes Date re-audit planned: 1/10/16

ID	Action (*Please detail actions required to implement recommendations*)	Person responsible	Target date
1	Present findings of this audit at team meeting	Lead Auditor	End 02/16
2	Discuss need to increase prescribing of vitamins as required with prescribers within team (GPs and NMPs)	Lead Auditor	End 02/16
3	Repeat audit in September 2016 –looking at period from 1/03/16 to 31/08/16	Lead Auditor	End 11/16
4	Complete re-audit report	Lead Auditor	End 01/17
5			
6			

Date: 8/02/16

Key benefits/improvements that have resulted from this audit so far:

Notes:

Appendices: