

The growing prevalence and cost of maintenance dialysis treatment in Oman: Review of statistical figures from 1983 until 2013: A retrospective review

Al-Za'abi RK^{1,2}, Tolmie E¹, Rice AM¹, Mohsin N^{2,3}, Al-Busaidi A²
¹ University of Glasgow, ²Ministry of Health/Oman, ³Sultan Qaboos University



Background:

In Oman there is a paucity of information on the burden of renal failure treatments, such as maintenance dialysis, on the individual and the health service. The global evidence shows increasing incidence and prevalence of kidney failure patients who need kidney dialysis or kidney transplantation, with poor outcomes and increased cost (Eknoyan et al, 2004). Worldwide, maintenance dialysis treatment has dramatically increased 1.7 times from 165 per million population (pmp) in 1990 to 284 pmp in 2010 (Thomson et al., 2015).

Aim:

To compile, review and make the available statistics of incidence, prevalence, mortality rate and cost of maintenance dialysis treatment in Oman accessible in order to determine if there is increasing burden of renal failure, or not, in Oman so suitable recommendations can be made.

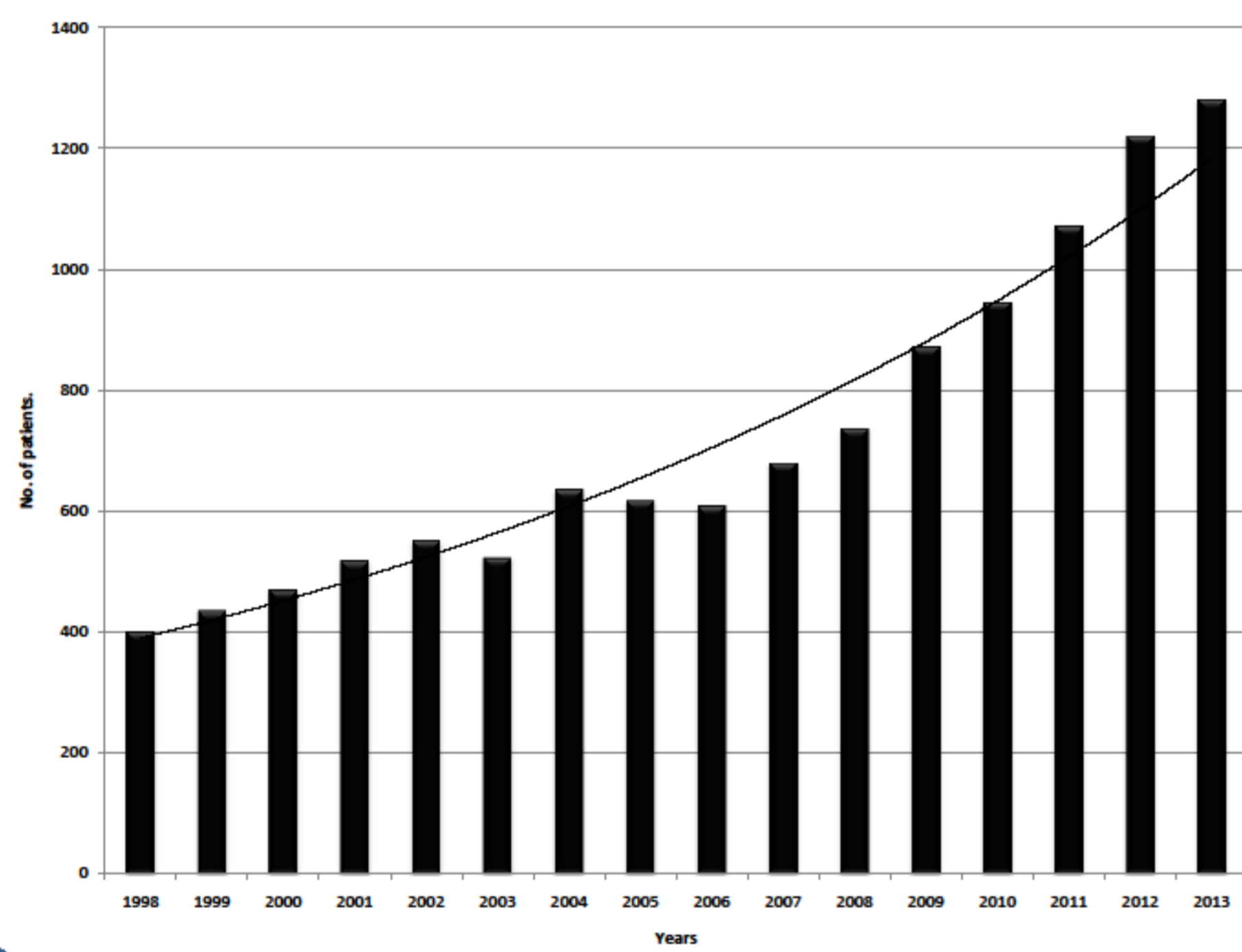
Methods:

The design was quantitative research (retrospective review). The main data collection centre for all Oman-nephrology information, which was located in the capital of Oman, was visited and retrospective data on all the available statistics of incidence, prevalence, mortality rate and cost of maintenance dialysis treatment in Oman were gathered.

Results:

The statistics from 1983-1997 were incomplete, but from 1998-2013 the data were complete for prevalence and showed an increase in dialysis treatment in Oman (Figure 1). The total number of patients on dialysis in 1983 was 35 and in 1998 was 401. This had increased to 1281 by 2013.

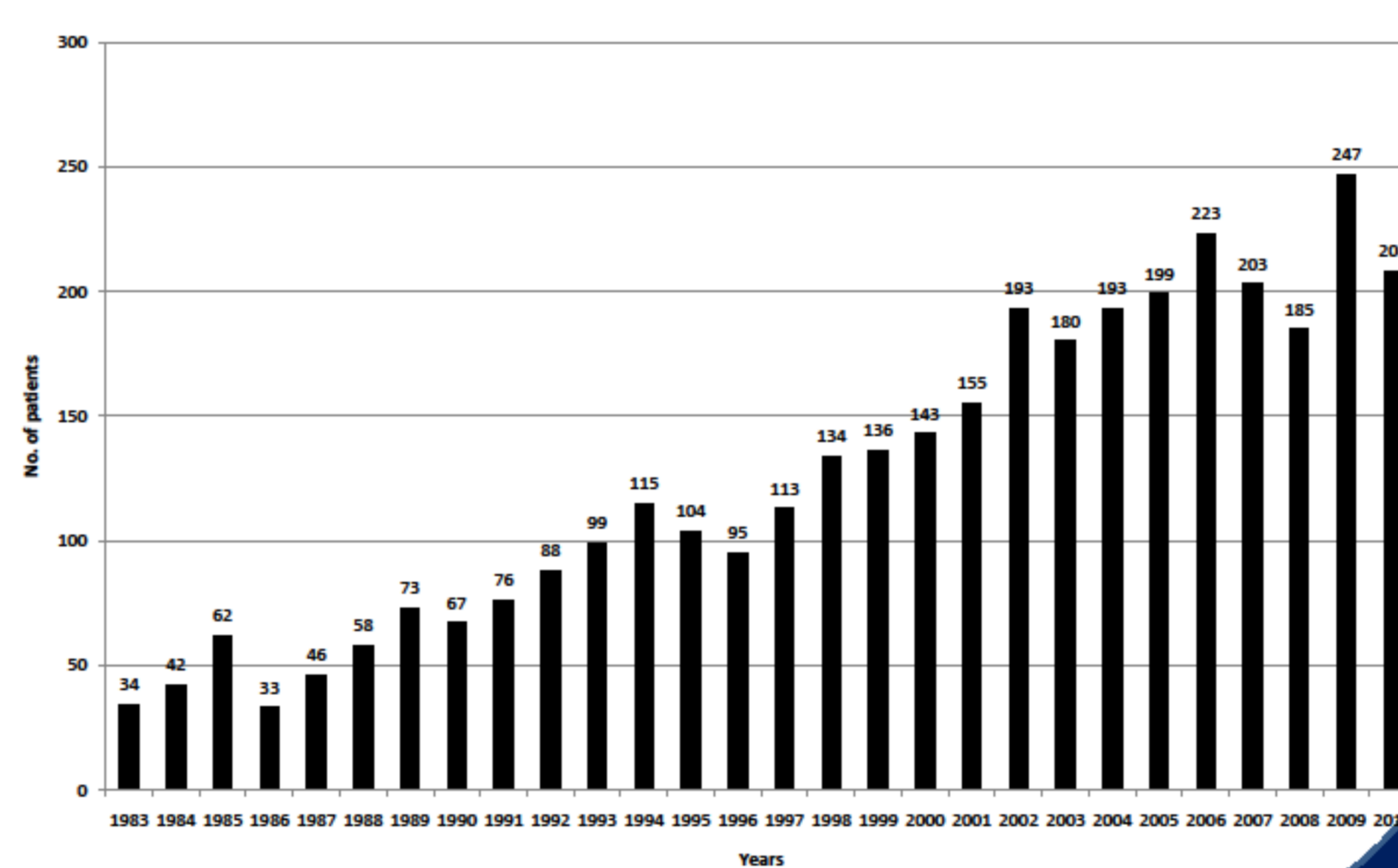
Figure 1. Prevalence of kidney failure patients on dialysis in Oman (1998-2013)



Results:

The statistics of the new patients were reported in the database for the years 1983 to 2010. The number of new patients reported in 1983 was 34 and sequentially for the following years: 42, 62, 33, 46, 58, 73, 67, 76, 88, 99, 115, 104, 95, 113, 134, 136, 143, 155, 193, 180, 193, 199, 223, 203, 185, 247, and 208 in 2010 per country per annum (Figure 2.)

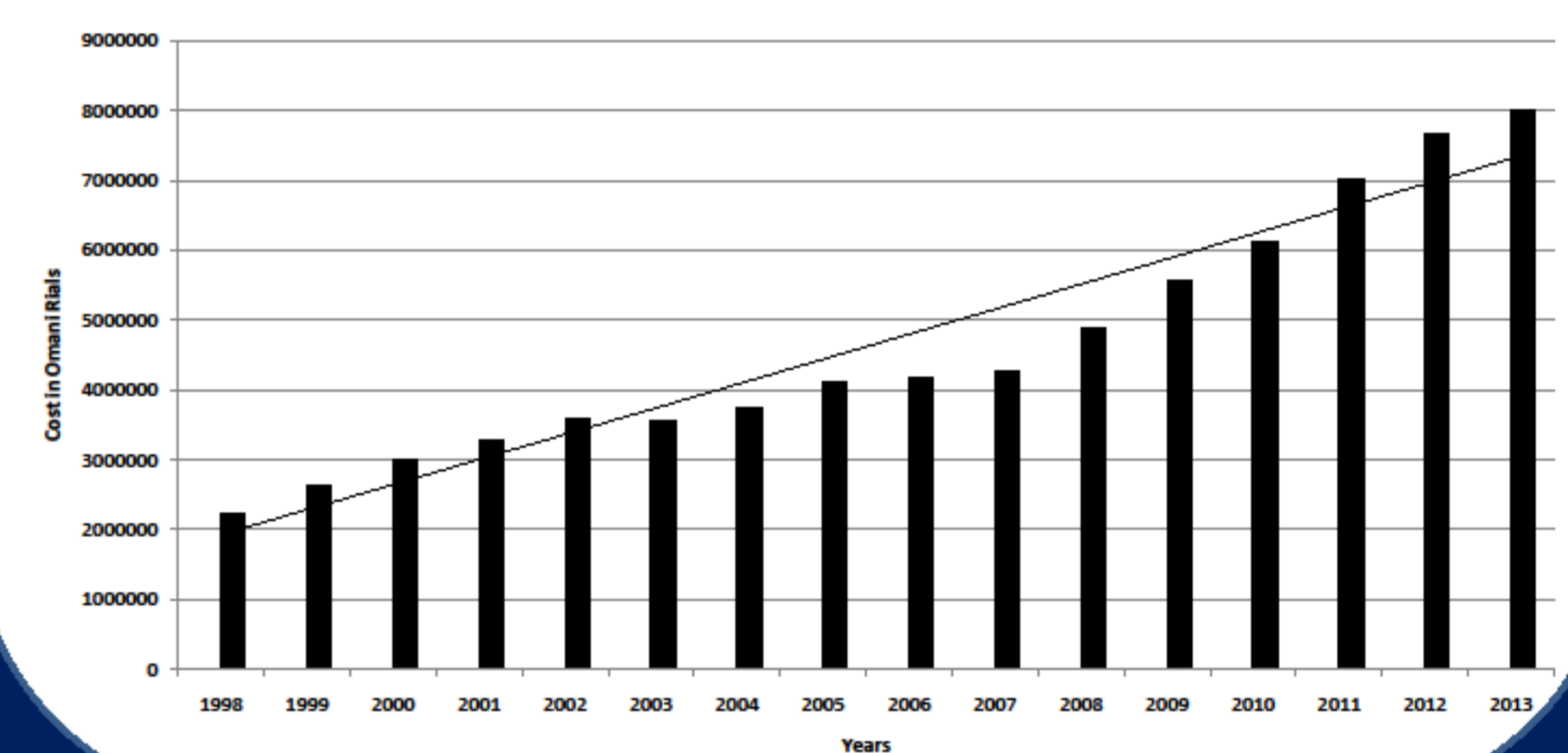
Figure 2. Incidence of kidney failure patients on dialysis in Oman (1983-2013)



Results:

The cost of maintenance dialysis treatment in Oman increased steadily from 4 million Pounds Sterling (GBP) in 1998 to 14 million GBP in 2013 (Figure 3.) as the dialysis sessions conducted in Oman increased from 45,113 to 162,000 dialysis session per annum. The single dialysis session in Oman (public sector) direct cost was 49.8 Omani Rials or 88.8 GBP (Please note that this is the cost in 2013).

Figure 3. Cost of haemodialysis in Oman (1983-2013)



Discussion

Prevalence of maintenance dialysis increased significantly during the years 1983 to 2013 in Oman. The annual cost for maintenance dialysis in 2013 was 14million GBP which means that a massive budget is spent on dialysis and the country needs to give attention to this alarming problem. The findings of this research are consistent with the global current knowledge on kidney failure (Eknoyan et al, 2004; Thomson et al., 2015) and, if used, it could be very helpful in mapping the road for kidney failure services in Oman.

Conclusion

The data produced by this study showed a significant increase in dialysis treatment in Oman, which is in line with the global trend. Yet, it is clear that there is a burden carried by the country, the health sector and patients on dialysis because of the complex nature of this life-long treatment. Therefore, conduction of additional research to obtain a complete picture of the situation, and thereafter, find the best ways to deal with this problem, for example, putting prevention programs in action (i.e. diabetic-hypertension control to prevent kidney failure) and perhaps putting an active renal transplant program in place.

References

Thomas, B., et al., 2015. [Maintenance Dialysis throughout the World in Years 1990 and 2010](https://www.researchgate.net/profile/Bernadette_Thomas2/publications). *Journal of the American Society of Nephrology*, [online] Available at: https://www.researchgate.net/profile/Bernadette_Thomas2/publications [Accessed 16 October 2015]

Eknoyan, G., et al., 2004. The burden of kidney disease: Improving global outcomes. *Kidney International*, [online] Available at: <http://www.nature.com/ki/journal/v66/n4/abs/4496003a.html> [Accessed 07 January 2016]

Acknowledgments

This research is funded by Ministry of Health in Oman

Contact: Ruqiya Al-Za'abi (r.al-za'abi.1@research.gla.ac.uk or raqawi@hotmail.com)

