
ASALEE: a French experience of doctor-nurse teamwork in general practice

WONCA 2008

Workshop : Patient empowerment. European experiences.

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Services proposés par
ASSOCIATION ASALEE

METHODS (1)

- ASALEE is an association created in 2004 by a group of GPs
- Nurses employed by the ASALEE association
 - Each one works with several GPs at 2 or 3 different practices
 - **They meet patients to act on health education**
- 42 GPs and 7 nurses
- On a voluntary basis (both GP and patient)



METHODS (2)

■ Medical protocols :

- Screening
 - breast cancer
 - cervical cancer
 - intestinal cancer
- Screening and follow-up of type 2 diabetes
- Screening for cognitive disorder in the elderly
- Auto-evaluation of blood pressure
- Primary prevention of cardiovascular risks



METHODS (3)

psa Bienvenue sur le portail services asalée

Services proposés par ASSOCIATION ASALÉE

AFIN DE CONSULTER ET D'UTILISER LE PSA, VEUILLEZ VOUS IDENTIFIER À L'AIDE DE VOTRE ACCÈS PERSONNALISÉ
Zone sécurisé

ACCÈS PERSONNALISÉ

Veillez rentrer votre nom d'utilisateur et votre mot de passe.

Nom d'utilisateur

Mot de passe

Mot de passe oublié

Créer un nouveau compte

OK

asalée

À votre service pour être au service de vos patients...

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Suivi systématique:

Poids	<input type="text"/>	kg	IMC: Le poids doit être compris entre 30 et 200	
Traitement	<input type="checkbox"/> Régime seul <input type="checkbox"/> Insulino réquerant	Anti diabétiques oraux: aucun Pioglitazone chlorhydrate Metformine Gliclazide Glipizide Miglitol Repaglinide Carbutamide Acarbose Glimepiride Rosiglitazone maleate Glibenclamide		
Tension artérielle prise	<input type="text"/>	/	<input type="text"/>	<input type="radio"/> manuel <input type="radio"/> automatique <input type="radio"/> automesure
Facteur de risque associé	<input type="checkbox"/> Tabac			

Co-pathologies ou complications:

<input checked="" type="checkbox"/> Hypertension artérielle	<input checked="" type="checkbox"/> Artérite	<input type="checkbox"/> Néphropathie
<input type="checkbox"/> Insuffisance coronarienne	<input checked="" type="checkbox"/> Rétinopathie diabétique	<input type="checkbox"/> Neuropathie périphérique

Suivi tous les 4 mois:

HbA1C % le

Objectifs atteints:

<input type="checkbox"/> diabète équilibré	<input type="checkbox"/> objectif tensionnel (135/80)	<input type="checkbox"/> objectif lipidique
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Mesures à prendre par le médecin:

<input type="checkbox"/> Modification traitement antidiabétiques oraux	<input type="checkbox"/> Modification ou mise à l'insuline
<input type="checkbox"/> Correction HTA	<input type="checkbox"/> Prise en charge hyperlipidémie

Coaching infirmière:

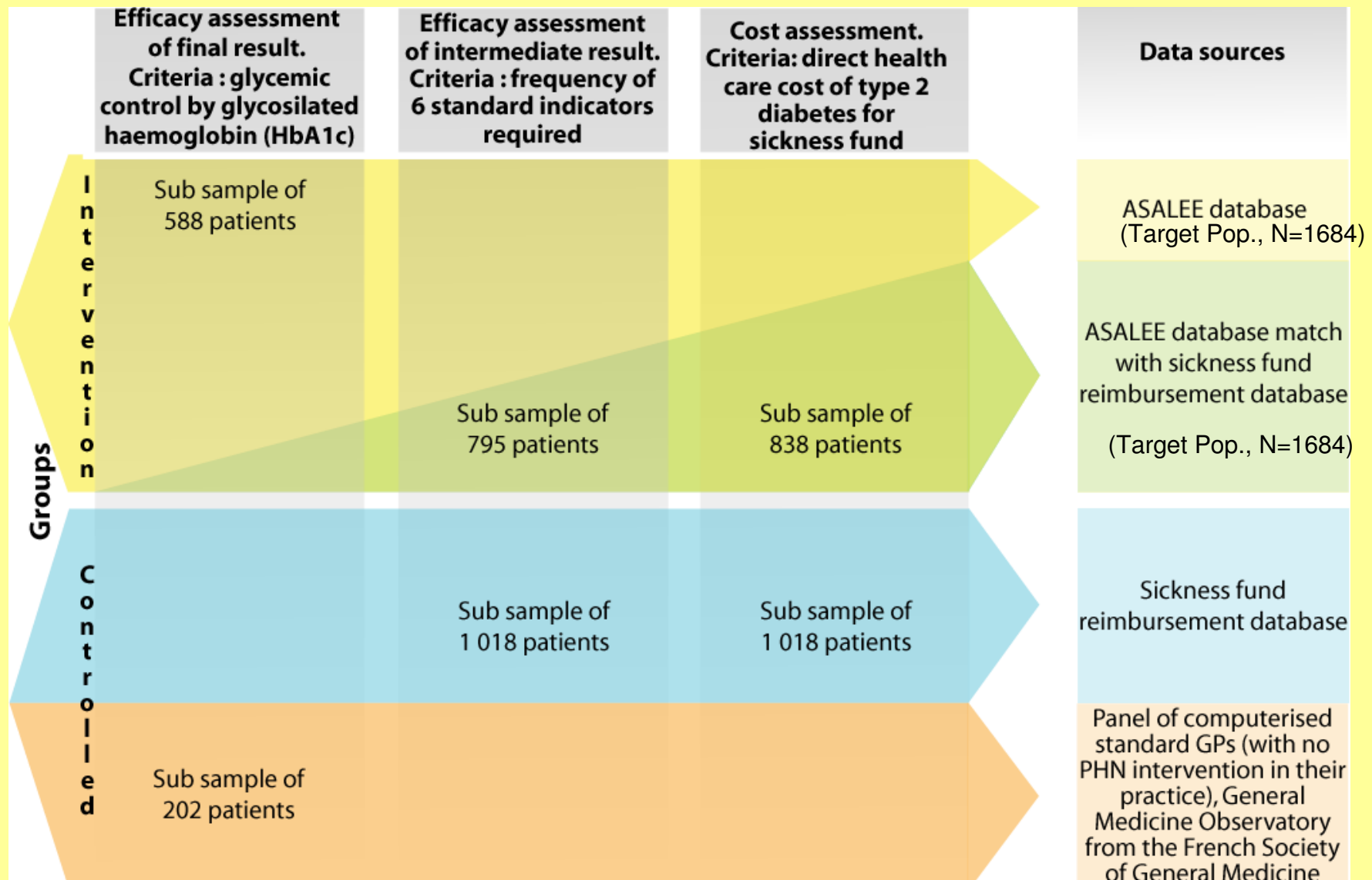
<input type="checkbox"/> Exercice physique	<input type="checkbox"/> Mesures diététiques
<input type="checkbox"/> Arrêt du tabac	

- Nurse collects the data in a computerised database allowing a day by day follow-up

Evaluation

- In 2007
 - External researchers (IRDES)
 - Satisfaction survey 18.3/20 on 322 questionnaires
-

Materiel & Method(1): 3 retrospective case studies (intervention vs. control group) for type 2 diabetes patients (T2D) treated by oral anti-diabetic medication



Results(3): a T2D patient in ASALEE has 2.1 to 6.8 more chance to become or still be correctly followed up, depending the procedures

	Probability to became or still be correctly followed											
	HbA1c		Micro albuminuria		Funduscopy		Creatinemia		ECG		Lipid checkup	
	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq
<i>Controlled Group (sample of Insured)</i>	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
<i>Intervention Group (ASALEE)</i>	2,12	<.0001	6,82	<.0001	1,25	0,0462	2,53	<.0001	2,40	<.0001	2,62	<.0001
Controlled by Age, Gender, Localisation within the department, Type of Mandatory Social Security Scheme, Presence of medicated diabetes complication, Type of medicine treatment												
Adjustment												
Deviance	436,76	<.0001	358,48	0,0228	182,19	0,3588	316,56	0,3414	330,53	0,1703	344,84	0,0675
Pearson	363,55	0,0146	307,76	0,4771	154,34	0,8789	315,36	0,359	289,12	0,7608	301,12	0,5839
Wald test	140,79	<.0001	336,38	<.0001	24,32	0,0068	86,00	<.0001	145,26	<.0001	111,26	<.0001
Pseudo R2	0,0611		0,1563		0,0142		0,0620		0,0682		0,0572	
Percent Concordant	66,30		75,20		56,50		66,90		66,80		65,40	
Somers' D	0,34		0,51		0,15		0,35		0,35		0,32	
ROC curve	0,67		0,76		0,58		0,68		0,67		0,66	
gamma	0,34		0,52		0,16		0,36		0,35		0,32	

Results(4): the odd ratio of the glycemic control process indicator increases to 2.4 when the visit for education and counseling is delivered by nurse

N=1325	Probability to became or still be correctly followed											
	HbA1c		Micro albuminuria		Funduscopy		Creatinemia		ECG		Lipid checkup	
	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq
<i>Controlled Group (sample of Insured) (ASALEE) without PHN VEC</i>	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
<i>(ASALEE) with PHN VEC</i>	1,87	<,0001	6,72	<,0001	1.207	0.1799	2,76	<,0001	2,55	<,0001	2,15	<,0001
	2,45	<,0001	6,93	<,0001	1.303	0.0597	2,32	<,0001	2,70	<,0001	2,70	<,0001
Controlled by Age, Gender, Localisation within the department, Type of Mandatory Social Security Scheme, Presence of medicated diabetes complication, Type of medicine treatment for diabetes												
Adjustment												
Deviance	538,03	<,0001	464,40	0,011	270,90	0.0491	389,95	0,5902	431,40	0,113	468,17	0,0079
Pearson	444,41	0,0502	390,11	0,5879	224,44	0.6617	422,81	0,1787	385,04	0,6573	397,08	0,4895
Wald test	143,16	<,0001	336,42	<,0001	24,55	0,0171	86,21	<,0001	111,27	<,0001	147,27	<,0001
Pseudo R2	0,0624		0,1563		0,0143		0,0623		0,0572		0,0693	
Percent Concordant	66,50		75,30		0,16		66,90		65,50		66,90	
Somers' D	0,34		0,51		0,50		0,35		0,32		0,35	
ROC curve	0,67		0,76		0,58		0,68		0,66		0,67	
gamma	0,34		0,52		0,16		0,36		0,32		0,35	

Results(5): these results still be robust even if we look at the Wave4 for which we have a real before and after design

N=1325	Probability to became or still be correctly followed											
	HbA1c		Micro		Funduscopy		Creatinemia		ECG		Lipid checkup	
	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq	Odds ratio	Pr>ChiSq
<i>Controlled Group (sample of Insured)</i>	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
Asalee Wave1	1,58	0,0061	6,47	<.0001	1,16	0,4169	3,99	<.0001	1,89	0,0002	2,57	<.0001
Asalee Wave2	3,28	<.0001	10,34	<.0001	1,12	0,6218	3,52	0,0017	2,96	<.0001	2,43	0,0004
Asalee Wave3	3,13	<.0001	5,58	<.0001	1,24	0,3326	1,21	0,4471	2,64	<.0001	1,72	0,0116
Asalee Wave4	1,89	<.0001	6,70	<.0001	1,37	0,036	2,83	<.0001	2,44	<.0001	3,27	<.0001
Controlled by Age, Gender, Localisation within the department, Type of Mandatory Social Security Scheme, Presence of medicated diabetes complication, Type of medicine treatment for diabetes												
Adjustment												
Deviance	655,37	<.0001	611,39	0,0001	365,95	0,0044	406,71	0,9969	581,98	0,0021	512,34	0,2154
Pearson	542,82	0,0432	512,04	0,2182	289,00	0,6349	449,36	0,8943	482,61	0,5603	466,77	0,748
Wald test	149,68	<.0001	338,47	<.0001	25,21	0,0217	92,28	<.0001	148,22	<.0001	115,02	<.0001
Pseudo R2	0,0664		0,1586		0,0147		0,0699		0,0699		0,0601	
Percent Concordant	66,80		75,80		56,60		68,50		67,00		66,20	
Somers' D	0,34		0,52		0,15		0,38		0,35		0,33	
ROC curve	0,67		0,76		0,58		0,69		0,67		0,67	
gamma	0,35		0,53		0,16		0,38		0,35		0,34	

Result(6): ASALEE is relatively efficient compared with the cost of treatment in the control group

	Differential cost (Year1-Year0)							
N = 1751	Total expenditure for all procedures		Total expenditure only for diabetes or its risk factors or complications procedures		Ambulatory total expenditure for all procedures		Ambulatory total expenditure only for diabetes or its risk factors or complications procedures	
Observed additional cost within ASALEE	60 €		60 €		60 €		60 €	
Estimated additional cost threshold for ASALEE	400 €		300 €		70 €		70 €	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Control group (OMG)	Réf.		Réf.		Réf.		Réf.	
Intervention group (ASALEE)	296,6547	0,0459	176,5628	0,0346	205,9259	0,0315	81,9749	0,0309
Controlled by Age, Gender, Localisation within the department, Type of Mandatory Social Security Scheme, Presence of medicated diabetes complication, Type of medicine treatment for diabetes								
Adjustment								
R ²	0,0239		0,0392		0,0393		0,1064	
R ² adjusted	0,0177		0,0331		0,0332		0,1007	

Conclusion

- This type of organisation (skill mix) appear to be both effective in terms of health outcomes and cost
- The add value of nurses is clearly demonstrate for final outcome (with visit for education and counseling) as for intermediate outcome (electronic patient registry + electronic GP reminder)
- Our results are coherent with the results of existing studies in other countries both in terms of effectiveness [i.e. Grimshaw & al 2006 ; Grimshaw & al 2004; Renders & al 2003; Laurent & al 2005; Buchan & al 2005; Zwarenstein & al 2005] or efficiency [i.e. Knight & al 2005; Beaulieu & al 2003]
- The question remains at least in France to modify the financing model of primary care organisation (FFS for all self-employed professionals in ambulatory care)?

Publication: a French report + working paper in English coming soon
(see on irdes website: www.irdes.fr)

ASALEE wants to thank all
participating patients and GPs

The image features a solid yellow background. In the top-left corner, there is a dark blue L-shaped line that extends horizontally across the top and then vertically down. At the bottom, there is a single dark blue horizontal line.

Thank you for your attention