DIMNUTION SPECTACULAIRE DE LA MORTALITÉ DE L'ASTHME: MÉDICAMENT OU ÉDUCATIONS THÉRRAPEUTIQUE?

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Centre Valaisan de pneumologie, CHCVs
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↘mortalité de l’asthme: médicament ou Education Thérapeutique (ET)?

- Asthme: définition
- Education thérapeutique: was ist das?
- Epidémiologie de actuelle de l’asthme
- Progrès médicamenteux (thérapeutiques)
- Perspectives

Définition de l'asthme

- **Inflammation** chronique voies respiratoires
- **Hyperréactivité** bronchique
- **Obstruction** voies respiratoires
  - complètement réversible
  - spontanément ou avec traitement
- → ***épisodes récidivants de dyspnée sifflante avec toux***

Asthma: 1990 - 2000

- « the commonest chronic disease »

(WHO 1992; GINA 2003)

- Heavy financial burden

on patients and society

- Longlasting disease
- All over the year
- All over the day

(day and night)?

Asthma attack: highly surprising. Is it true?

"The most annoying thing about asthma is that you never know when an attack can happen, and then

some of the cleanest air in Britain, yet an unusually high rate of asthma. German researcher Erika von Mutius at the University of Munich determined a few years ago that rates of the ailment were higher in western Germany than in the east, despite assumptions that the poorer, more polluted east would produce a less healthy population. And a study comparing ethnic Chinese living in Hong Kong with Chinese living in poorer, dirtier cities on the mainland produced similar results.

HOW WE LIVE NOW The air within may be more to blame than that outside. Our modern houses, sealed environments with central heating, wall-to-wall carpeting, double-glazed windows and air-conditioning, are welcome territories for dust mites and other allergens like cockroaches. Our pets shed hair, which remains embedded in rugs; dust mites flourish in mattresses and pillows like mushrooms after a storm. Japanese asthma specialists believe that the rise in asthma there is linked to the replacement of traditional tatami mats with Western-style carpeting, while residents of a village in Papua New Guinea showed no signs of the illness until some missionaries vacated the town, leaving their blankets behind for the villagers to sleep on.

But exposure to allergens is only part of the story. "Fifty percent of the population is allergic, but half the population doesn't have asthma," notes Stephen Holgate, professor of immunopharmacology at the University of Southampton, who is working to develop an asthma vaccine, "so the question is why the allergy in some people picks the lung as the target for its expression rather than somewhere else. And we don't

Children who have had other serious diseases, like measles, are less likely to develop asthma, other studies have shown that children from large families—who are exposed to a variety of infections early on—have less asthma. In recent years as the eastern part of Germany has adopted better standards of hygiene, the rates of other infections, like bronchitis, have gone down, while the allergy rate has gone up. "The most annoying thing about asthma," says Frédéric Thisse, a 32-ye... Belgium who has been h... he was a toddler, "is tha... when it can happen, a... you can do to avoid it."

The good news is t... controlled with existin... there are some promisi... pipeline. The most obvi... away from potential trig... someone sensitive to hou... mountain to live for six ... level where house-dust ... asthma will get better."

drugs—one of the most common is albuterol—open the airways, providing fast, short-acting relief from acute attacks.

The inhalers' effectiveness, however, can also be the asthmatic's downfall—a palliative solution that allows the sick person to relax his vigilance over a serious illness and perhaps ignore other options for care. Corticosteroids such as prednisone offer longer-term relief. Delivered either by in-... press the con... doctors are c... medication, t... leukotrienes ... chemicals th... during the i... ease. One of t... by the British ... effect of thes... cently won F...

The Economics of Asthma

Country and year of data	Prevalence in 1990	Direct medical costs*	Indirect costs**
Australia 1991	8.5%	$250.0 million	$207.0 million

Time 1997

Clinical Commentary

Permissive Hypercapnic Ventilation

DAVID V. TUXEN

Intensive Care Unit and Hyperbaric Service, Alfred Hospital, Prahan, Victoria, Australia

AJRCCM 1994

Asthma in CH

- SAPALDIA: 7% in adults;
- SCARPOL: 10% in children
- Costs USA: 2000 à 15000 $/pt/yr
- Costs CH : 1.2 mia CHF/yr; 2602 CHF/pt;

Stable asthma 1770.-; unstable asthma 4227.-

(Scuz et al Eur Respir J 1999; 13: 281) (Jönsson B. Asthma's impact on society Dekker 2000; 251)

Organisation Mondiale de la Santé définit l'***éducation thérapeutique du patient*** comme suit:

« Former le malade pour qu'il puisse acquérir un savoir-faire adéquat, afin d'arriver à un équilibre entre sa vie et le contrôle optimal de la maladie. »

« L'éducation thérapeutique du patient est un processus continu qui fait partie intégrante des soins médicaux. L'éducation thérapeutique du malade comprend la sensibilisation, l'information, l'apprentissage du traitement, le support psychosocial, tous liés à la maladie et au traitement. La formation doit aussi permettre au malade et à sa famille de mieux collaborer avec les soignants. »

Asthma self-management

- « Asthma education is essential to help patients acquire adequate motivation and skill to manage their disease »

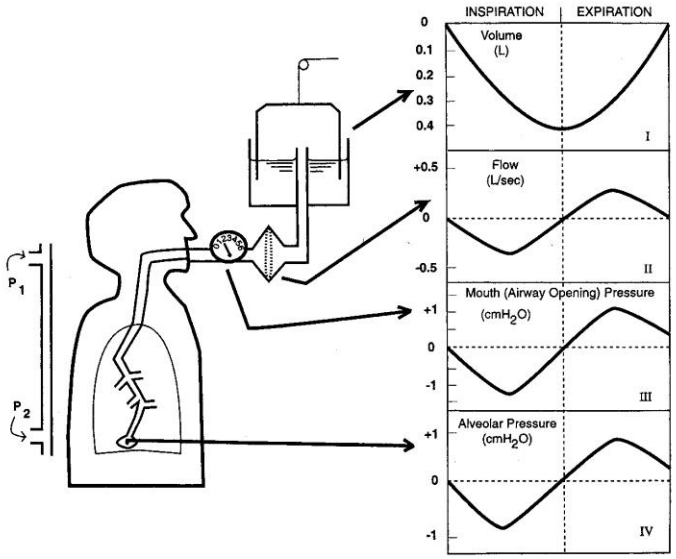
National asthma education programme USA 1991

- patient empowerment
- éducation thérapeutique

1998

Lung Biology in Health and Disease Volume 113
Executive Editor: Claude Lenfant

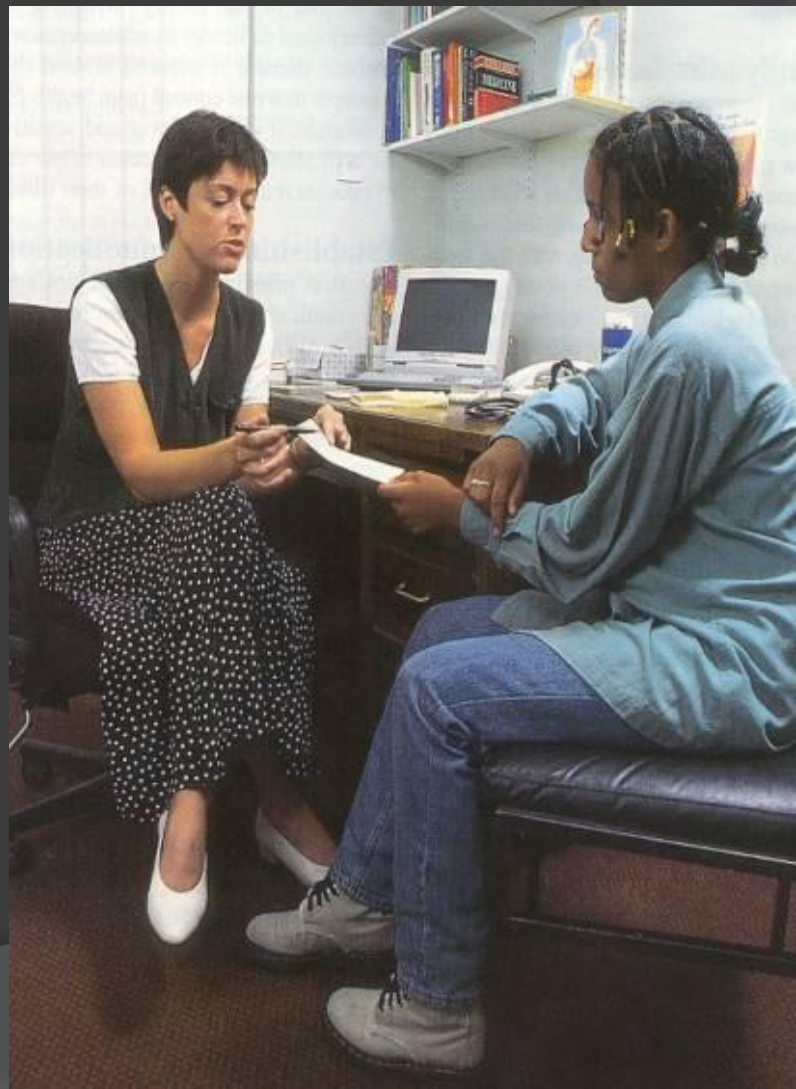
Self-Management of Asthma



edited by

Harry Kotses
Andrew Harver

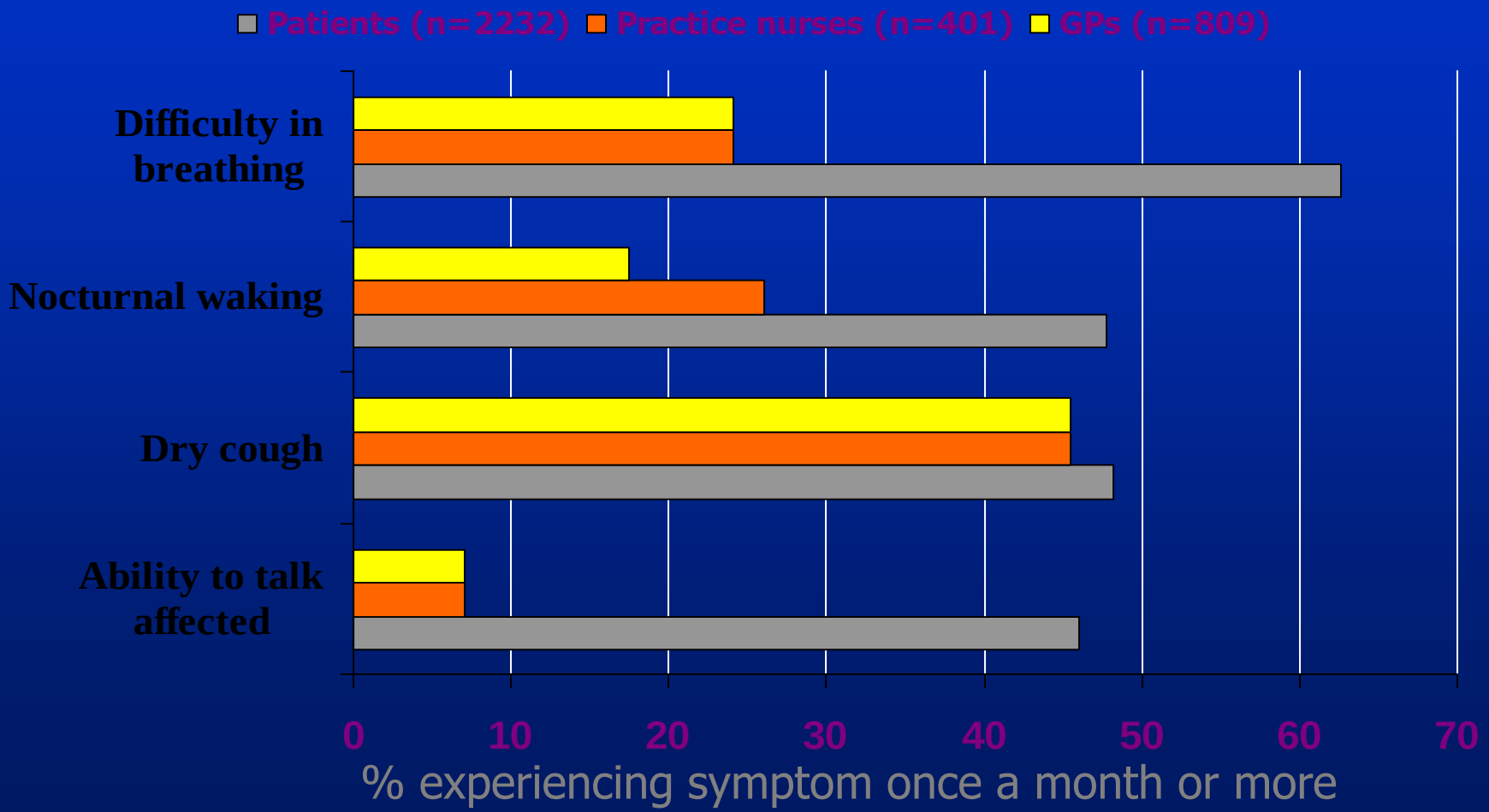
Asthme: premier message



CH: 7% des adultes; 10% des enfants
(SAPALDIA, SCARPOL)

www.ginasthma.org

Frequency of Asthma Symptoms: Difference Between Estimates of Health Professionals and Patients



Price D, *et al.* Asthma J 1999; **4**: 74-78

LUNGENLIGA SCHWEIZ
LIGUE PULMONAIRE SUISSE
LEGA POLMONARE SVIZZERA
LIA PULMUNARA SVIZRA

BESSER
Asthr
LEBEN

VIVERE M
CON
l'asm

Interdisziplii
Asthma-Pa

A. Benouniche, F
B. Jordan, C. Pc
Verantwortlich

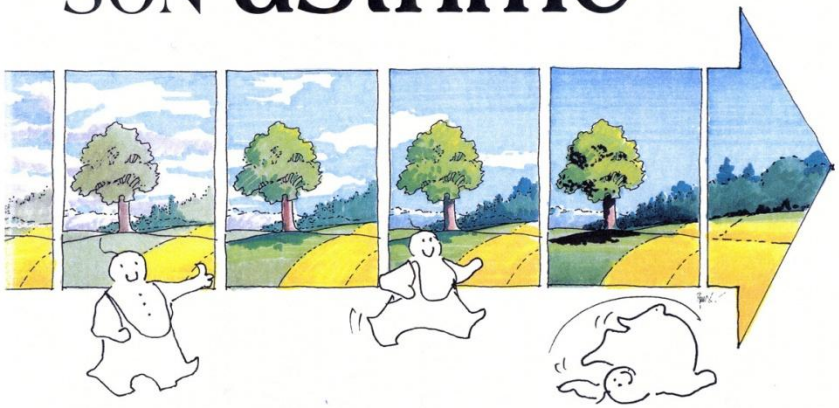
Un approccio
dedicato ai p

A. Benouniche, F. Bes
B. Jordan, C. Poncio

Opuscolo svilu
la Lega valles

LUNGENLIGA SCHWEIZ
LIGUE PULMONAIRE SUISSE
LEGA POLMONARE SVIZZERA
LIA PULMUNARA SVIZRA

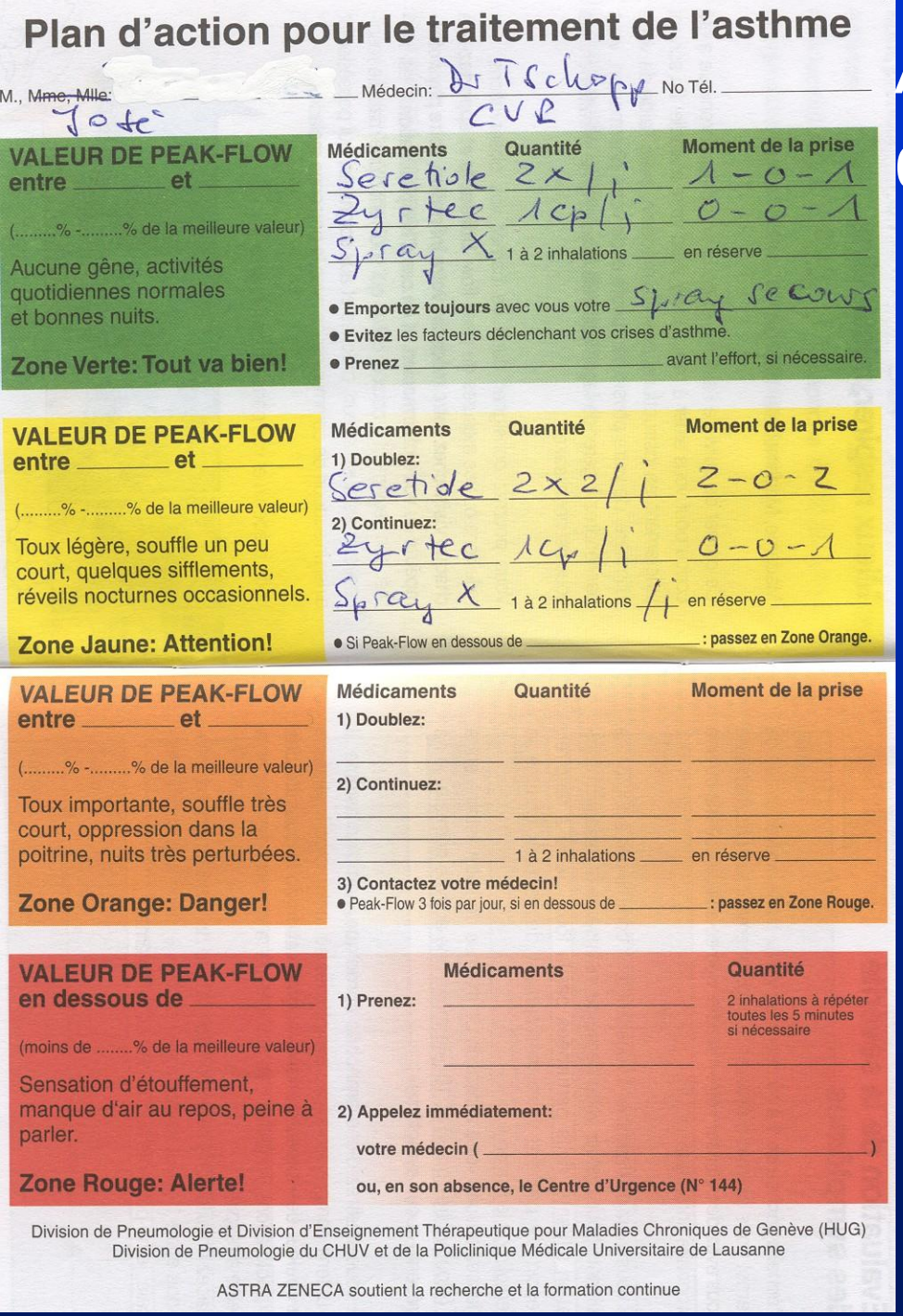
MIEUX VIVRE AVEC SON asthme



Approche en réseau à l'intention des patients asthmatiques

A. Benouniche, F. Besse, C. Courteheuse, D. Du Pasquier, J.-G. Frey, S. Garrone, R. Giger, S. Jacquemet, B. Jordan, G. Nicolet, C. Poncioni, A. Revaz, C. Rosset, T. Rothe, C. Steurer-Stey, C. Uldry, J.-M. Tschopp.

Brochure développée avec le soutien du Centre Valaisan de Pneumologie et de la Ligue Valaisanne contre les Maladies Pulmonaires et pour la Prévention.



Plan d'action pour le traitement de l'asthme

M., Mme, Mlle: [redacted] Médecin: Dr Tschopp CVE No Tél. _____

VALEUR DE PEAK-FLOW
entre _____ et _____

(.....% -.....% de la meilleure valeur)

Aucune gêne, activités quotidiennes normales et bonnes nuits.

Zone Verte: Tout va bien!

Médicaments	Quantité	Moment de la prise
Seretide	2x1/j	1-0-1
Zyrtec	1cp/j	0-0-1
Spray X	1 à 2 inhalations	en réserve _____

- **Emportez toujours** avec vous votre Spray secours
- **Evitez** les facteurs déclenchant vos crises d'asthme.
- **Prenez** _____ avant l'effort, si nécessaire.

VALEUR DE PEAK-FLOW
entre _____ et _____

(.....% -.....% de la meilleure valeur)

Toux légère, souffle un peu court, quelques sifflements, réveils nocturnes occasionnels.

Zone Jaune: Attention!

Médicaments	Quantité	Moment de la prise
1) Doublez:		
Seretide	2x2/j	2-0-2
2) Continuez:		
Zyrtec	1cp/j	0-0-1
Spray X	1 à 2 inhalations /j	en réserve _____

- Si Peak-Flow en dessous de _____ : **passez en Zone Orange.**

VALEUR DE PEAK-FLOW
entre _____ et _____

(.....% -.....% de la meilleure valeur)

Toux importante, souffle très court, oppression dans la poitrine, nuits très perturbées.

Zone Orange: Danger!

Médicaments	Quantité	Moment de la prise
1) Doublez:		
2) Continuez:		
_____ 1 à 2 inhalations		en réserve _____

3) Contactez votre médecin!

- Peak-Flow 3 fois par jour, si en dessous de _____ : **passez en Zone Rouge.**

VALEUR DE PEAK-FLOW
en dessous de _____

(moins de .....% de la meilleure valeur)

Sensation d'étouffement, manque d'air au repos, peine à parler.

Zone Rouge: Alerte!

Médicaments	Quantité
1) Prenez: _____	2 inhalations à répéter toutes les 5 minutes si nécessaire
_____	_____

2) Appelez immédiatement:

votre médecin (_____ **)**

ou, en son absence, le Centre d'Urgence (N° 144)

Division de Pneumologie et Division d'Enseignement Thérapeutique pour Maladies Chroniques de Genève (HUG)
Division de Pneumologie du CHUV et de la Policlinique Médicale Universitaire de Lausanne

ASTRA ZENECA soutient la recherche et la formation continue

Asthme: quels messages?

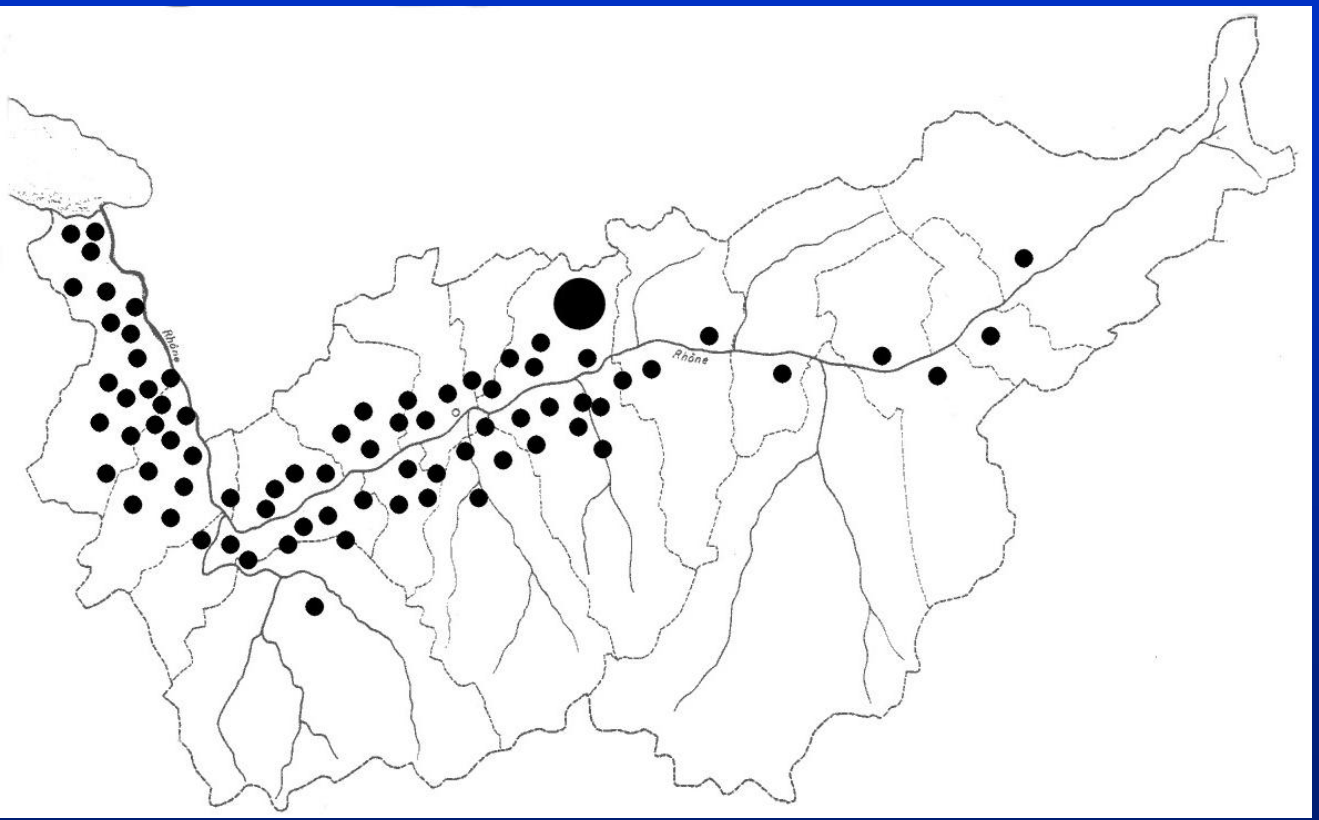
- Utiliser un plan d'action <u>personnalisé</u> et écrit
- Importance du <u>suivi</u>:

1) comment vous dormez?
2) comment se passent vos journées? (activités habituelles)
3) ressentez-vous de la toux, de la gêne à respirer?

- Votre peak flow?

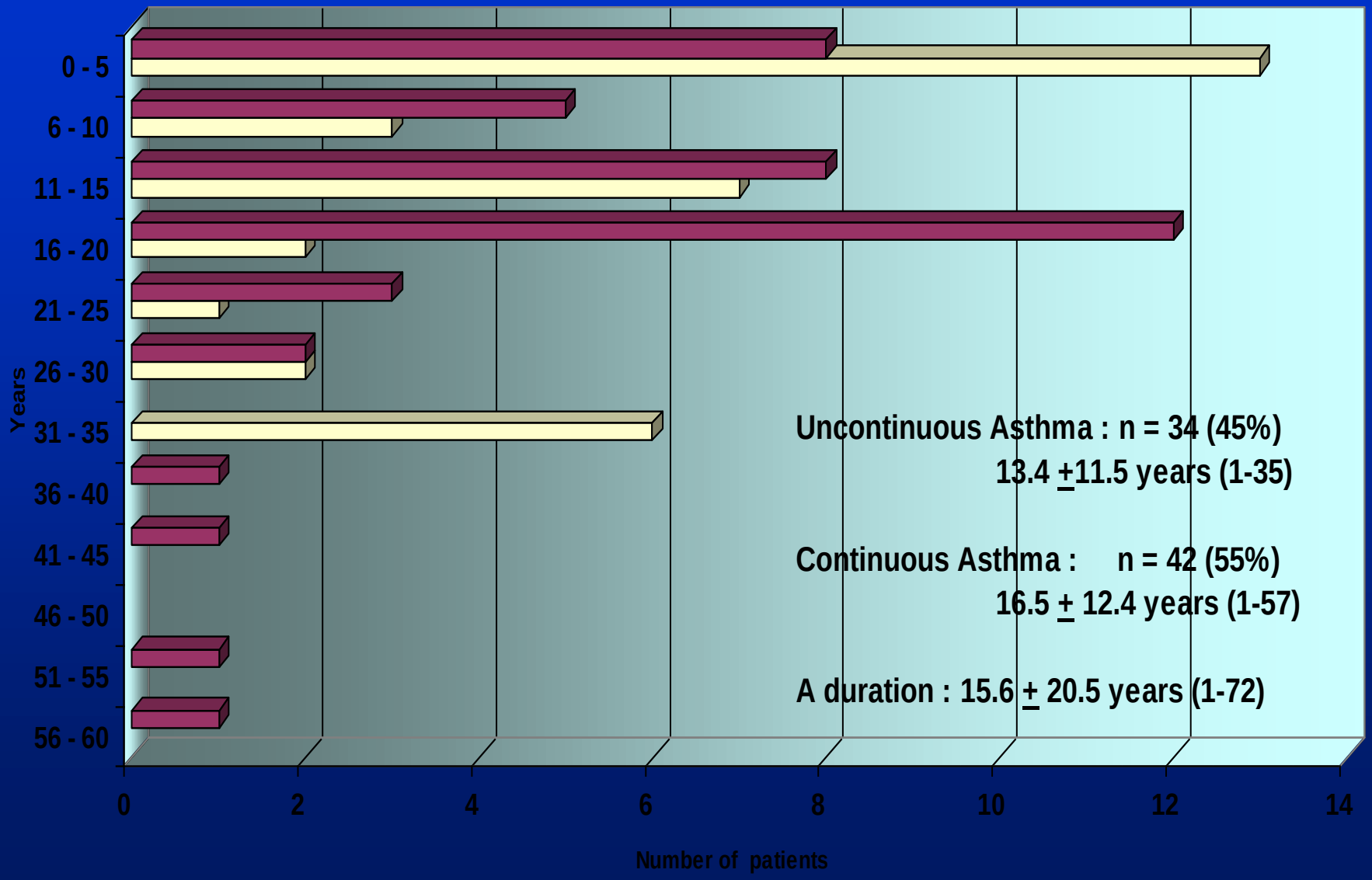
Mme Parmentier 076 3901388
027 6038168

Réseau de santé: asthme

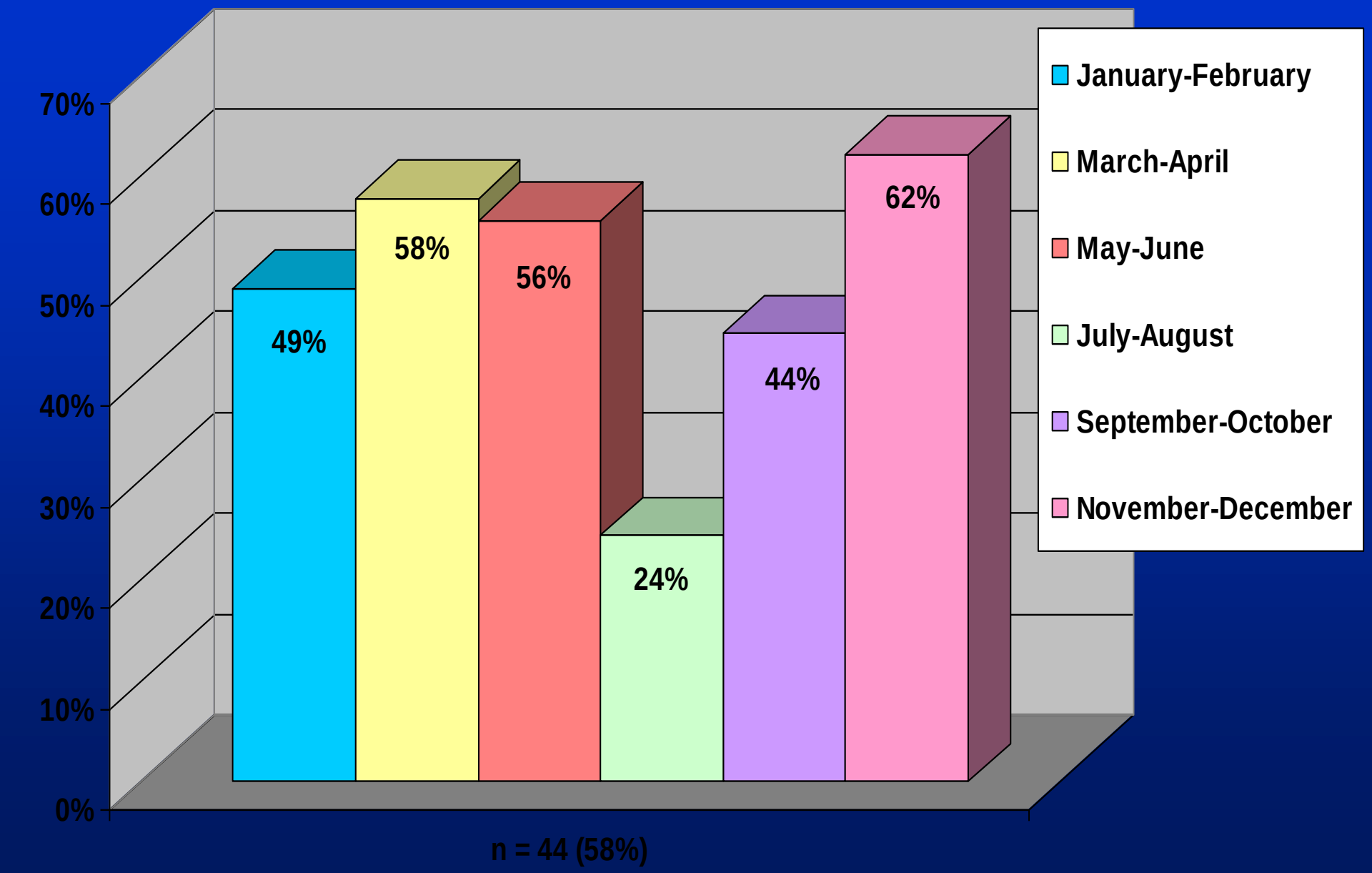


- médecins de premier recours 37
- médecins spécialistes 7
- pharmaciens 17
- coordination: Centre Valaisan de Pneumologie + Ligue Pulmonaire VS

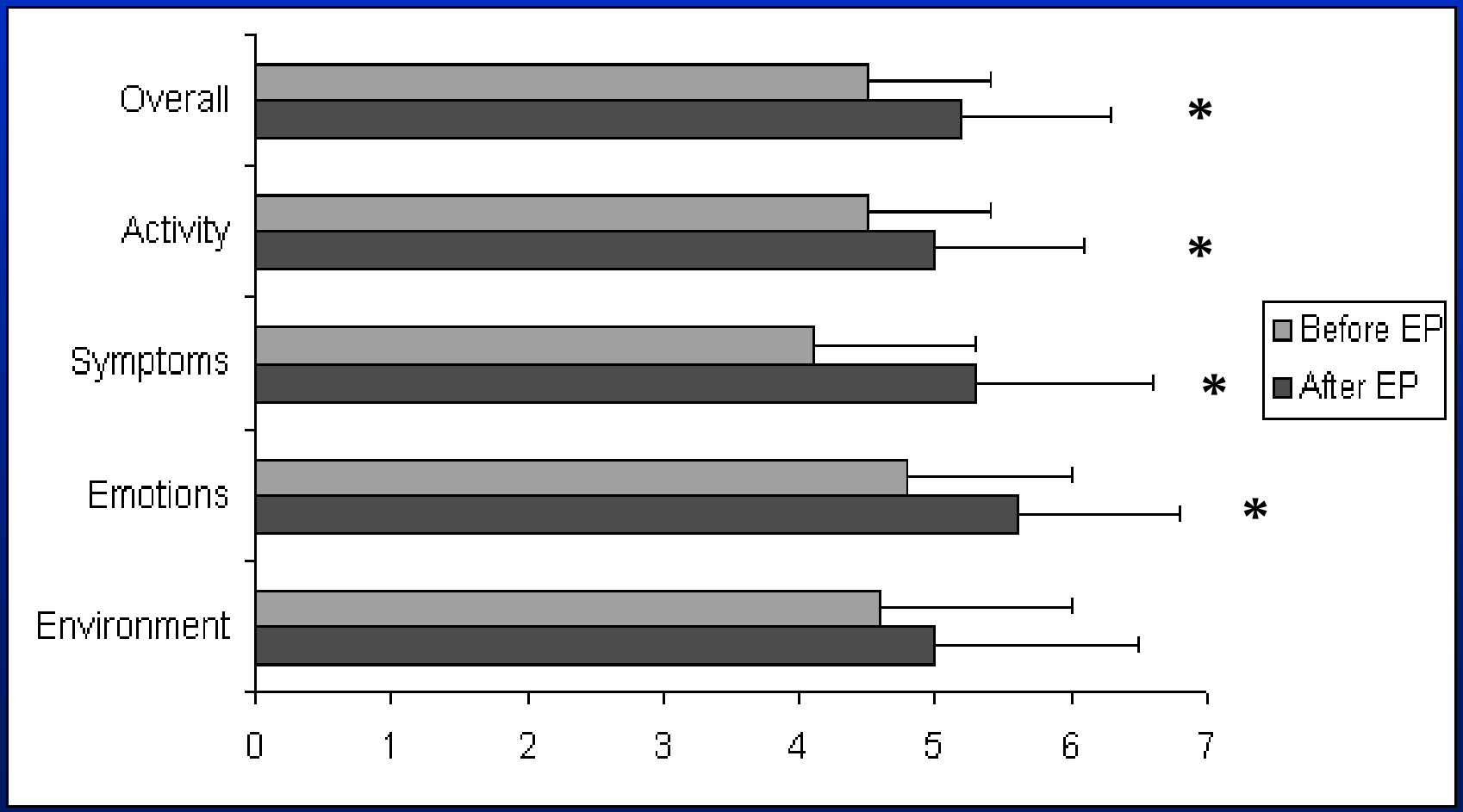
Years with Asthma



Asthma over the year (months)



Asthma related quality of life before and after education programme (EP; *=p<.001; = p<.01)



Spared costs (n=66)

- Indirect costs:

526 work days x 385.-* = 202.510.-

- Direct costs:

164 hospital days x 1000.-* = 164.000.-

Total = 366.510.-

- Spared costs/patient = 5553.-

(*Data Office Fédéral de la Statistique Neuchâtel)

Respiratory Medicine (2005) 99, 355–362

ELSEVIER

respiratoryMEDICINE

Asthma outpatient education by multiple implementation strategy. Outcome of a programme using a personal notebook

J.-M. Tschopp[a,*], J.-G. Frey[a], J.-P. Janssens[c], C. Burrus[a], S. Garrone[a], R. Pernet[a], K. Imhof[a], F. Besse[a], S. Marty[b], C. Rosset[b], J.-P. Assal[b]

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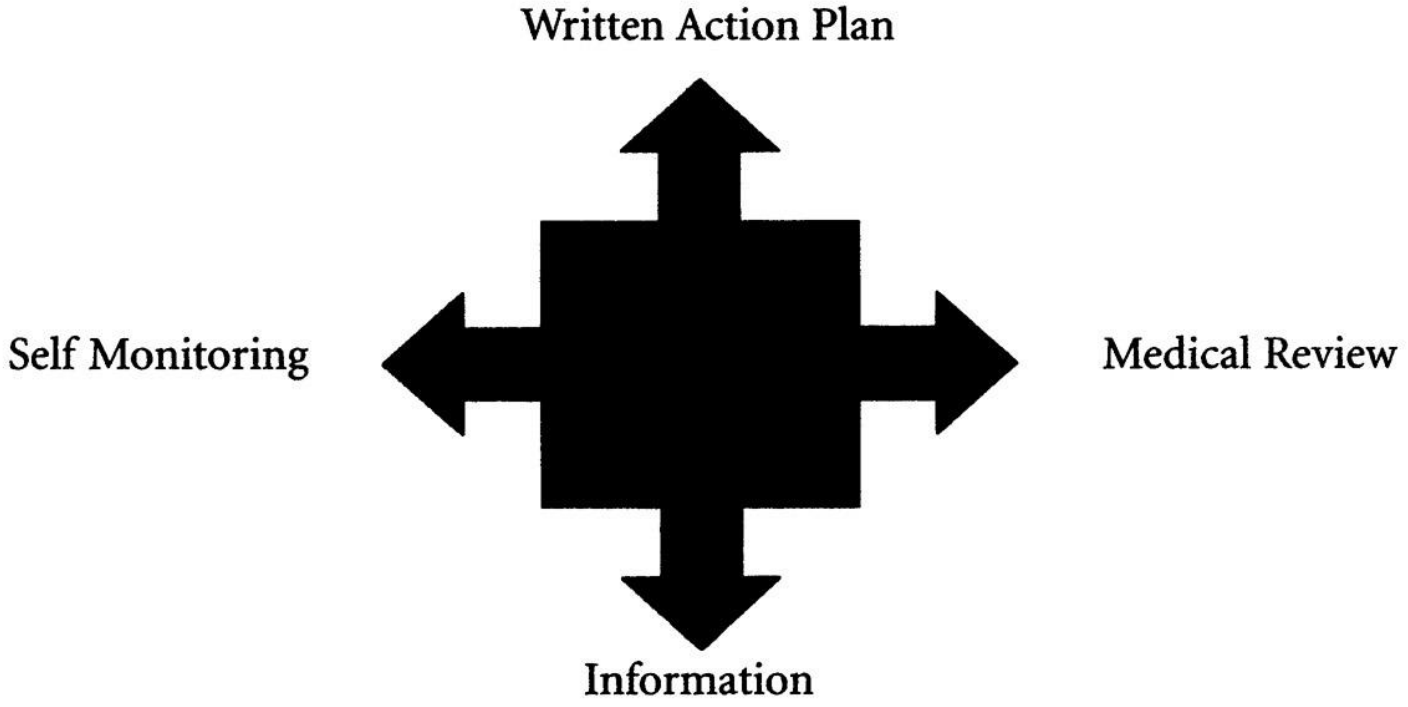
[c]*Divisions de pneumologie et d'enseignement thérapeutique Hôpitaux Universitaires Genevois, 1211 Genève 4, Switzerland.*

Received 17 March 2003; accepted 12 July 2004

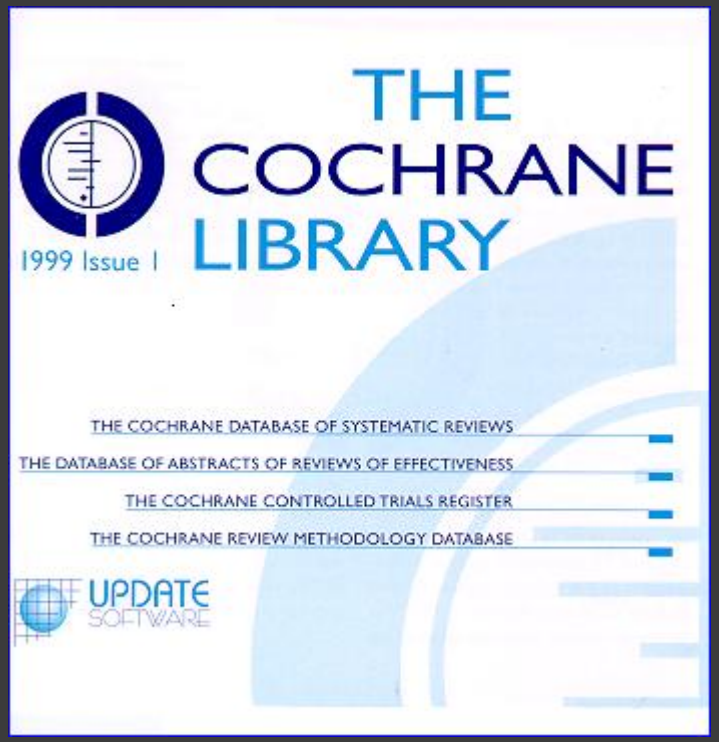
Asthma self-management: 4 well proven components

Figure 23–1 Components of asthma education.



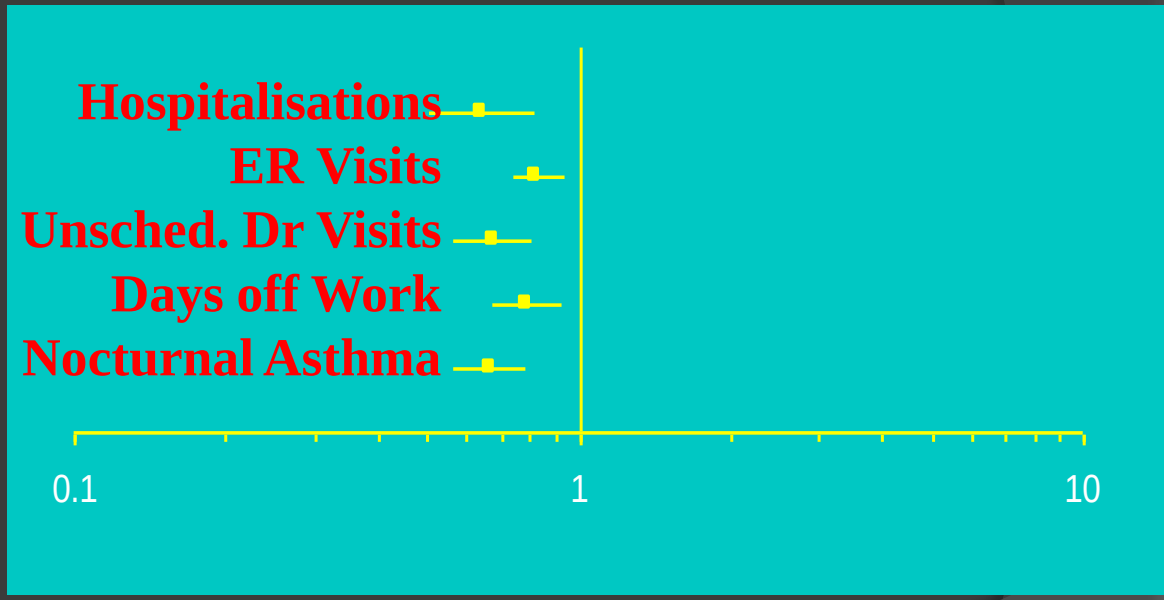
Cochrane data base 2003 et 2005

What is the evidence in favour of self management education?

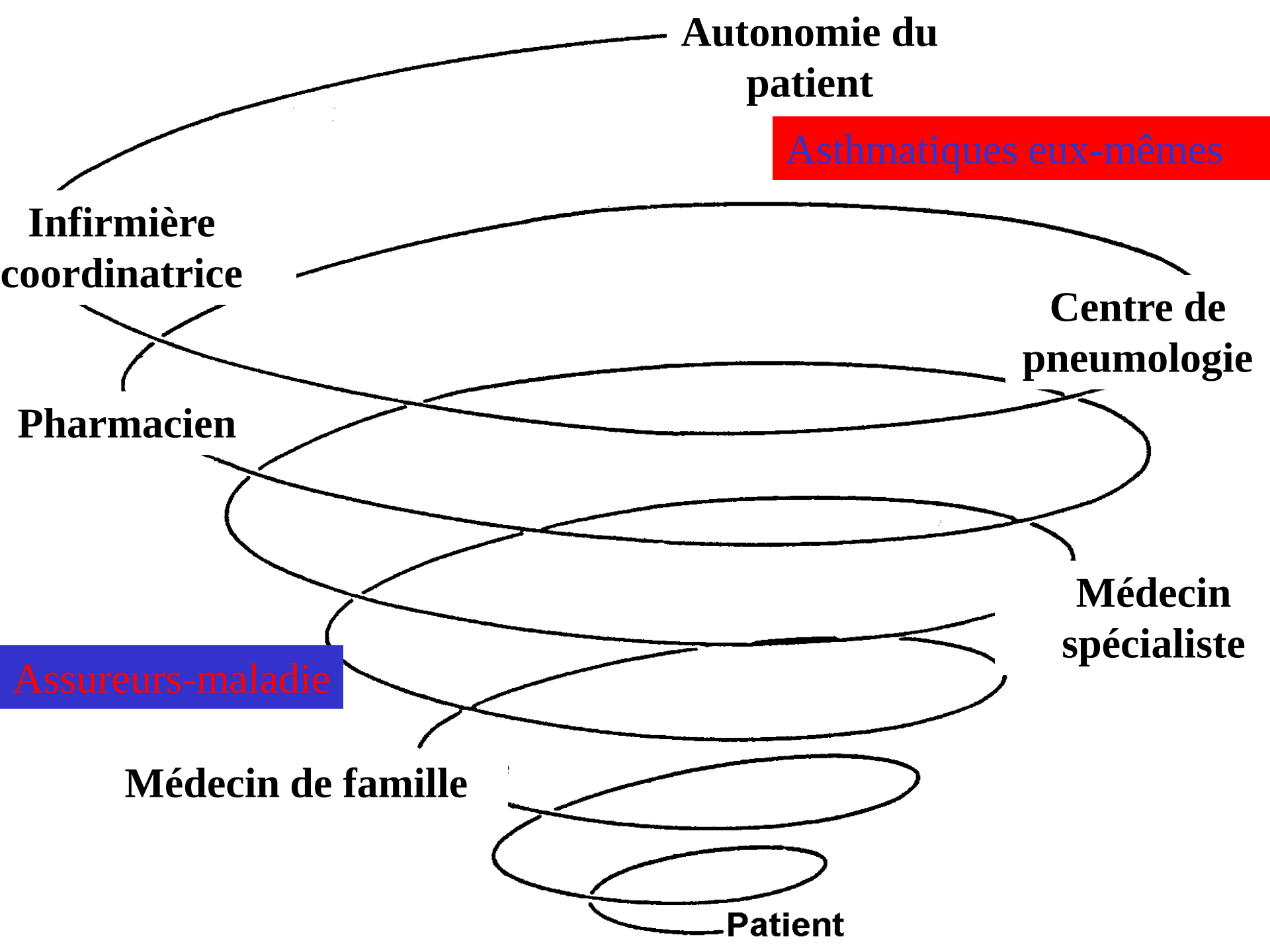


Self-Management vs Usual Care

RR (95% CI)



Favours Self-Management


Autonomie du patient
Asthmatiques eux-mêmes
Infirmière coordinatrice
Centre de pneumologie
Pharmacien
Médecin spécialiste
Assureurs-maladie
Médecin de famille
Patient

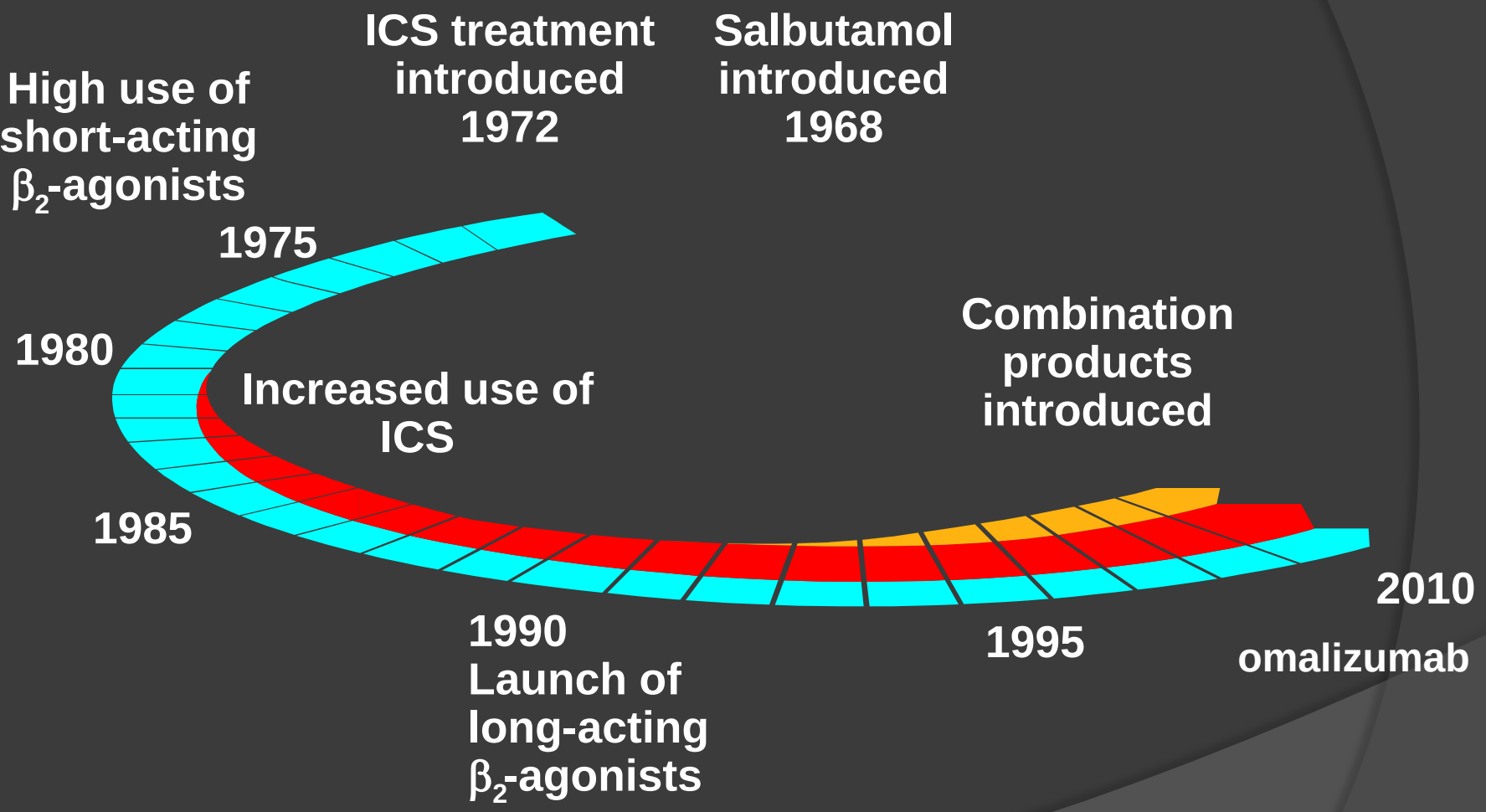
Asthma: mortality in CH

- 1990: 366 deaths
- 1999: 200 deaths
- 2004: 122 deaths

Magic pill?

Office Fédéral de la statistique Neuchâtel

Progression of asthma pharmacotherapy



Todesursachenstatistik

Ursachen der Sterblichkeit 2005 und 2006

Statistique des causes de décès

Causes de mortalité en 2005 et 2006

Statistica delle cause di morte

Cause di mortalità 2005 e 2006

OF Statistique: mortalité de l'asthme en Suisse

Année	*Homme*	*femme*	*Total*	SIDA h	SIDA f	Total
1990	175	131	306	289	60	349
1991	168	117	285			
1992	151	127	278			
1993	121	103	224			
1994	112	121	233			
1995	152	133	285			
1996	120	118	238			
1997	117	122	239			
1998	111	100	211			
1999	99	101	200			
2000	81	100	181			
2001	63	83	146			
2002	68	88	156			
2003	46	73	119			
2004	55	67	122			
2005	46	74	120			
2006	31	68	99	54	23	77

mortalité CH: $5/10^5$

mortalité CH: $2/10^5$ USA: $3.9/10^{5*}$

mortalité CH: $1.4/10^5$

Diminution de la mortalité de l'asthme: 68% !

Quid des maladies cardiovasculaires?

Quid des cancers?

www.bfs.admin.ch

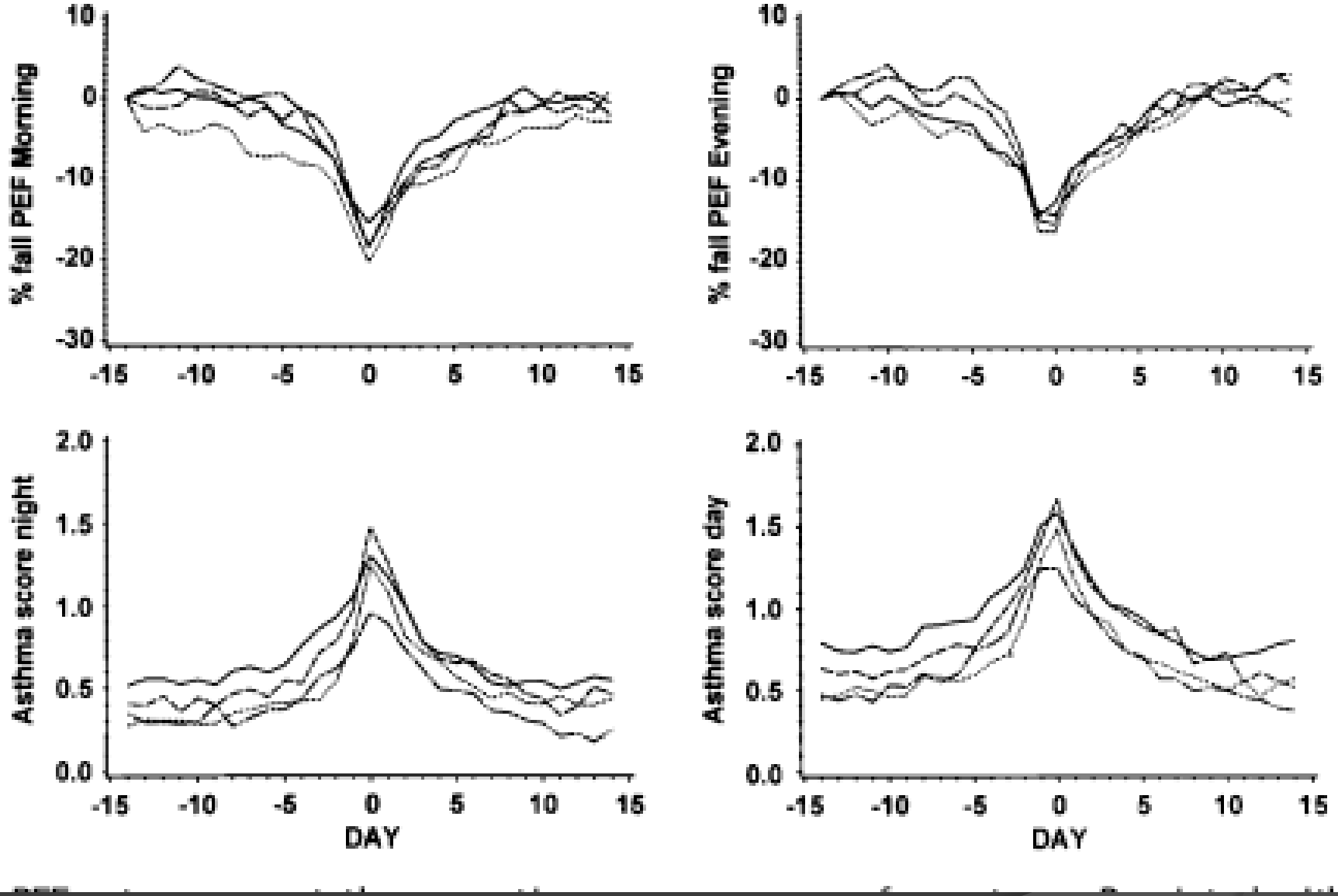
↘ mortalité de l'asthme: médicament ou éducation Thérapeutique (ET)? **CONCLUSION**

- Education thérapeutique: efficace et efficiente
- Progrès médicamenteux (thérapeutiques)
- Perspectives

Asthme : svp il faut quitter l'approche pompier

Asthmatics: 56% > 5 nights with symptoms before hospitalisation

Blainley D 1991



Tattersfield A et al. Exacerbation of asthma: a descriptive study of 425 severe Exacerbation. The FACET international study group.
Am J Respir Crit Care Med 1999; 160: 594

Les hospitaliers et l'autisme

Journal of Asthma, 46:974–979, 2009

ISSN: 0277-0903 print / 1532-4303 online
DOI: 10.3109/02770900903274483

informa
healthcare

REVIEW ARTICLE

Inhaled Corticosteroids Should Be Initiated Before Discharge from th Emergency Department in Patients with Persistent Asthma

TIMOTHY H. SELF, PHARM.D.,[1,*] JENNIFER D. TWILLA, PHARM.D.,[1]
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National and International Guidelines concur that inhaled corticosteroids (ICS) are the preferred long-term maintenance drug therapy for mild persistent asthma for all ages. For moderate and severe persistent asthma, ICS are essential to optimal management, often concurrent with other key therapies. Despite strong evidence and consensus guidelines, ICS are still underused. While some patients who are treated in the emergency department (ED) have intermittent asthma, most have persistent asthma and need ICS for optimum outcomes. Failure to initiate ICS at this critical juncture often results in subsequent lack of ICS therapy. Along with a short course of oral corticosteroids, ICS should be initiated before discharge from the ED in patients with persistent asthma. Although the NIH/NAEPP Expert Panel Report 3 suggests considering the prescription of ICS on discharge from the ED, The Global Initiative for Asthma (GINA) 2008 guidelines recommend initiation or continuation of ICS before patients are discharged from the ED. The initiation of ICS therapy by ED physicians is also encouraged in the emergency medicine literature over the past decade. Misdiagnosis of intermittent asthma is common; therefore, ICS therapy should be considered for ED patients with this diagnosis with reassessment in follow-up office visits. To help ensure adherence to ICS therapy, patient education regarding both airway inflammation (show airway models/colored pictures) and the strong evidence of efficacy is vital. Teaching ICS inhaler technique, environmental control, and giving a written action plan are essential. Lack of initiation of ICS with appropriate patient education before discharge from the ED in patients with persistent asthma is common but unfortunately associated with continued poor patient outcomes.

ATS/ERS Task Force on Asthma Severity and Control for Clinical Trials

Eur Respir J 2008; 32: 545–554
DOI: 10.1183/09031936.00155307

PERSPECTIVE

A new perspective on concepts of asthma severity and control

D.R. Taylor, E.D. Bateman, L-P. Boulet, H.A. Boushey, W.W. Busse, T.B. Casale, P. Chanez, P.L. Enright, P.G. Gibson, J.C. de Jongste, H.A.M. Kerstjens, S.C. Lazarus, M[illegible] P.J. Sterk, S.W. S.E. Wenzel and

An Official American Thoracic Society/European Respiratory Society Statement: Asthma Control and Exacerbations

Standardizing Endpoints for Clinical Asthma Trials and Clinical Practice

Helen K. Reddel, D. Robin Taylor, Eric D. Bateman, Louis-Philippe Boulet, Homer A. Boushey, William W. Busse, Thomas B. Casale, Pascal Chanez, Paul L. Enright, Peter G. Gibson, Johan C. de Jongste, Huib A. M. Kerstjens, Stephen C. Lazarus, Mark L. Levy, Paul M. O'Byrne, Martyn R. Partridge, Ian D. Pavord, Malcolm R. Sears, Peter J. Sterk, Stuart W. Stoloff, Sean D. Sullivan, Stanley J. Szefler, Mike D. Thomas, and Sally E. Wenzel, on behalf of the American Thoracic Society/European Respiratory Society Task Force on Asthma Control and Exacerbations

This Joint Statement of the American Thoracic Society and European Respiratory Society was approved by the ATS Board of Directors on March 13, 2009 and by the ERS Executive Committee on November 27, 2008.

Taylor DR *et al, ERJ* 2008; 32:545-554.
Reddel HK, *et al, ARJCCM* 2009:180:59-99.

Asthme: une maladie sous-diagnostiquée

Journal of Asthma, 46:995–1000, 2009

ISSN: 0277-0903 print / 1532-4303 online
DOI: 10.3109/02770900903350481

informa
healthcare

ORIGINAL ARTICLE

Modifiable Risk Factors for Asthma Morbidity in Bronx Versus Other Inner-City Children

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[2]*University of Texas Health Sciences Center at San Antonio, Department of Pediatrics, San Antonio, Texas, USA*

Background: Bronx children have higher asthma prevalence and asthma morbidity than other US children. *Objective:* To compare risk factors for asthma morbidity present in Bronx children with those of children from other US inner-city areas. *Methods:* Cross-sectional, multi-state study of 1772 children ages 5–11 yrs. old with persistent asthma. Parental responses to the Child Asthma Risk Assessment Tool for 265 Bronx children are compared with those of 1507 children from 7 other sites (1 Northeast, 2 South, 2 Midwest, 2 West). *Results:* Bronx children were significantly more likely to be sensitized to reported aeroallergens in their homes than were children from the other sites (86% vs. 58%; $p < .001$). More Bronx parents reported household cockroaches (65% v 20%; $p < .001$), mice (42% v 11%; $p < .001$), and rats (7% v 3%; $p < .001$); using a gas stove to heat the home (20% v 9%; $p < .001$); and visible mold (48% v 25%; $p < .001$). Bronx parents were more likely to report pessimistic beliefs about controlling asthma (63% v 26%; $p < .001$) and high parental stress (48% v 37%; $p < .01$). *Conclusions:* Compared with other inner-city children with asthma, Bronx children are more likely to be exposed to household aeroallergens to which they are sensitized and have poor housing conditions. Their parents are more likely to report low expectations for asthma control and high levels of psychological stress. Interventions that address these identified needs may help to reduce the disproportionate burden of asthma morbidity experienced by Bronx children.

Enfants du Bronx

- Prevalence de l'asthme: 5% vs 9%
- Enfants du Bronx: > 2x + d'hospitalisations

n = 265 versus 1517 de villes moy. aisées des EU

TABLE 1.—A comparison of Bronx vs. other sites' results for the 9 domains of risk for asthma morbidity and selected domain items.

Domains of risk for asthma morbidity (and selected items)	Percentage of Bronx respondents with high risk (range)	Percentage of other sites' respondents with high risk (range)	*p* value	Odds ratio	95% confidence interval
1. Child sensitized to aero-allergens at home[a]	86 (86–87)	58 (22–95)	<0.001	4.63	2.62–8.18
2. Home environmental exposures	39 (36–41)	50 (30–79)	<0.001	.62	.49–.84
Household cockroaches	65 (60–72)	20 (14–36)	<0.001	7.57	5.70–10.04
Household mice	42 (34–50)	11 (4–18)	<0.001	5.78	4.32–7.75
Household rats	7 (7–7)	3 (0–8)	<0.001	2.32	1.32–4.06
Using gas stove to heat home	20 (20–21)	9 (4–20)	<0.001	7.08	4.83–10.39
Visible mold on walls	35 (34–36)	15 (8–25)	<0.001	3.26	2.38–4.45
Visible mold on walls, ceilings or windows	48 (46–49)	25 (21–39)	<0.001	2.66	2.04–3.48
Rugs in child's bedroom	14 (6–22)	64 (42–76)	<0.001	.09	.06–0.13
Rugs in living room	17 (9–26)	67 (46–86)	<0.001	.11	.08–0.15
3. Pessimistic asthma attitudes	63 (56–71)	26 (11–31)	<0.0026	4.86	3.69–6.40
4. High parental stress	48 (35–58)	37 (16–54)	<0.001	1.5	1.15–1.95
5. Medication non-adherence	33 (33–33)	39 (29–49)	NS	.83	.63–1.09
6. Environmental tobacco smoke	28 (24–31)	24 (15–34)	NS	1.22	.91–1.63
7. Concerns about child's behavior	26 (26–27)	22 (5–38)	NS	1.26	.03–1.69
8. Child responsible for medications	21 (15–27)	21 (4–41)	NS	.97	.70–1.36
9. Sub-optimal medical care	23 (23–24)	20 (7–34)	NS	1.20	.88–1.64


Merci de votre attention